# Rd 2 vs. Wyoming (Wind)

## 1NC

### 1

#### Immigration reform will pass, but capital’s key

NYT 1/31

[New York Times, 1/31/12, http://www.nytimes.com/2013/02/01/us/politics/senators-look-at-07-failure-for-lessons-on-immigration.html?\_r=0]

As eight senators in a bipartisan group look ahead to a broad immigration overhaul, they are also looking back to 2006 and 2007 — the last time a major immigration measure was considered — as something of a reverse playbook. Lesson 1? “Make sure you get out there and define what you’re trying to do,” said former Senator Trent Lott, the Mississippi Republican who, in 2007, was the minority whip when his chamber’s immigration efforts imploded. “Don’t forget to pay attention to the message, and don’t let the media define what you’re trying to do.” It is a tip that Mr. Lott says he has communicated to the staff of Senator Marco Rubio, a Florida Republican involved in the current effort, and so far Mr. Rubio seems to be heeding the advice. In recent weeks, he has focused on conservative media powerhouses, tirelessly wooing influential voices on the right like Bill O’Reilly and Rush Limbaugh. “The outreach by Marco Rubio has been very positive,” Mr. Lott said. “He’s very good at explaining what he wants to do.” Getting out ahead by articulating their immigration principles, as the group did in a Monday news conference, is only one of the ways the senators hope to learn from the mistakes of the past. This time, they said, they are capitalizing on a promising political environment, using more conciliatory language, and trying to harness media outlets to their advantage. They also plan to move their legislation through the Judiciary Committee, a step not taken in 2007 and one that helped doom the bill, and are working more closely **with businesses and labor unions** to make sure the two can also reach a compromise. “Our timing is right,” said Richard J. Durbin of Illinois, the No. 2 Democrat in the Senate. “The election results are still fresh in the minds of my Republican colleagues and they don’t want to go through this again.” President George W. Bush said in 2009 that it was “a mistake” to have pushed for changes to Social Security, rather than immigration, immediately after the 2004 election. By the time he took on immigration late in his second term, he was a lame duck president, weakened by the war in Iraq and facing dissent within his party. “By his own admission, President Bush made a strategic error in not pushing the issue right after his re-election,” said Kevin Appleby, the director of migration policy at the United States Conference of Catholic Bishops. “President Obama is not making the same mistake. He still has a lot of political capital to spend.” In the wake of the 2012 presidential election, where Mr. Obama’s defeat of Mitt Romney came with the help of 71 percent of the Hispanic vote, **those on all sides** of the immigration effort believe the climate is ripe for another attempt. And, at least in the early stages, they are taking steps to reach across the aisle, even with the words they choose. “The most important lesson I took way from 2006 and 2007 is that people had no faith that there wouldn’t be future waves of illegal immigrants,” said Senator Charles E. Schumer, a Democrat of New York in the Senate’s bipartisan immigration group. To show that he is serious about an overhaul, he explained, he is especially conscious of the language he uses; Mr. Schumer now refers to “illegal immigrants,” a term preferred by the right and an acknowledgment that the 11 million illegal immigrants currently in the country did, in fact, break the law. In a similar linguistic concession, Mr. Rubio, during Monday’s immigration news conference, referred to the “undocumented” workers, a term generally preferred by Democrats and loathed by his party’s conservative wing. In 2007, in an attempt to save time and reach a deal, the Senate bypassed the Judiciary Committee and brought the legislation straight to the floor. At the time, the senators who drafted the bill tried to band together to vote down any amendments that changed the substance of their compromise, an agreement that broke down. Several controversial amendments, including one that then-Senator Obama supported, ultimately led to the bill’s collapse. “What we’re doing now is we’re going to put it through committee,” Mr. Schumer said. “When the bill gets through committee, it will be battle-tested and we will be prepared for the floor in a better way.” The group is also considering again trying to maintain **a large voting bloc**, to squash any amendments they believe could kill their bill. “I think we have to unless there’s something that we both agree to,” Senator John McCain, Republican of Arizona, said when asked about such a possibility at an immigration panel on Wednesday. “It’s going to be fragile, as these kinds of things are, and so we will have to take some tough votes in order to keep it intact.”

#### Plan costs capital

Geman 12 (Ben, “Obama to Congress on green-energy tax-break extension: 'Do it now'”, The Hill, May 24, http://thehill.com/blogs/e2-wire/e2-wire/229457-obama-to-congress-on-green-energy-tax-break-extension-do-it-now)

The wind power industry and supply-chain companies are lobbying hard for an extension of the credits, arguing that uncertainty about the incentives is already hurting the sector and that some layoffs have begun. “Wind projects typically have an 18- to 24-month development cycle. So effectively the PTC is already expiring,” said Denise Bode, CEO of the American Wind Energy Association, a trade group, in a statement this week. “That is why an extension is urgently needed now. We can’t afford to wait until the [production tax credit] runs out.” But the fate of the credits — which have not lapsed since 2004 — remain **highly unclear** this year. The credits are tethered to wider election-year tax policy and reform debates that could drag any action past the 2012 elections, or even into next year. House Republicans have promised wide-ranging examination of expiring tax policy provisions, while Senate Democrats have pressed for an across-the-board extension of a suite of expiring provisions. Also, while the wind credits have long enjoyed bipartisan support, many Republicans are increasingly criticizing federal green energy programs. Sen. Chuck Grassley (R-Iowa), who has floated legislation to extend the credit, issued a statement ahead of Obama’s speech alleging the White House must engage more with Congress on various expiring tax provisions. “The provision is hung up in the lack of a way forward on dozens of expiring tax provisions. The President could exert his leadership by working with Congress on a way forward instead of calling for a provision that’s a no-brainer for many of us. He’s focusing on the easy part of a bigger task,” Grassley said Wednesday

#### K2 India relations

Los Angeles **Times**, 11/9/**2012** (Other countries eagerly await U.S. immigration reform, p. http://latimesblogs.latimes.com/world\_now/2012/11/us-immigration-reform-eagerly-awaited-by-source-countries.html)

"Comprehensive immigration reform will see expansion of skilled labor visas," predicted B. Lindsay Lowell, director of policy studies for the Institute for the Study of International Migration at Georgetown University. A former research chief for the congressionally appointed Commission on Immigration Reform, Lowell said he expects to see at least a fivefold increase in the number of highly skilled labor visas that would provide "a significant shot in the arm for India and China." There is widespread consensus among economists and academics that skilled migration fosters new trade and business relationships between countries and enhances links to the global economy, Lowell said. "Countries like India and China weigh the opportunities of business abroad from their expats with the possibility of brain drain, and I think they still see the immigration opportunity as a bigger plus than not," he said.

#### Nuclear war

**Schaffer**, Spring **2002** (Teresita – Director of the South Asia Program at the Center for Strategic and International Security, Washington Quarterly, p. Lexis)

Washington's increased interest in India since the late 1990s reflects India's economic expansion and position as Asia's newest rising power. New Delhi, for its part, is adjusting to the end of the Cold War. As a result, both giant democracies see that they can benefit by closer cooperation. For Washington, the advantages include a wider network of friends in Asia at a time when the region is changing rapidly, as well as a stronger position from which to help calm possible future nuclear tensions in the region. Enhanced trade and investment benefit both countries and are a prerequisite for improved U.S. relations with India. For India, the country's ambition to assume a stronger leadership role in the world and to maintain an economy that lifts its people out of poverty depends critically on good relations with the United States.

### 2

#### “financial incentives” are funding for investors to develop a project – that excludes purchases

**Czinkota et al, 9 -** Associate Professor at the McDonough School of Business at Georgetown University (Michael, Fundamentals of International Business, p. 69 – google books)

Incentives offered by policymakers to facilitate foreign investments are mainly of three types: fiscal, financial, and nonfinancial. **Fiscal incentives** are specific tax measures designed to attract foreign investors. They typically consist of special depreciation allowances, tax credits or rebates, special deductions for capital expenditures, tax holidays, and the reduction of tax burdens. **Financial incentives** offer special funding for the investor by providing, for example, land or buildings, loans, and loan guarantees. **Nonfinancial incentives** include guaranteed government purchases; special protection from competition through tariffs, import quotas, and local content requirements, and investments in infrastructure facilities.

#### Prefer precise limits – our interpretation gives a clear list with an intent to define – you create a massive topic that results in generics and one-sided debate on an already big and aff-biased topic

### 3

#### Electricity prices are declining

**Burtraw 8/21/12** (one of the nation’s foremost experts on environmental regulation in the electricity sector. “Falling Emissions and Falling Prices: Expectations for the Domestic Natural Gas Boom” http://common-resources.org/2012/falling-emissions-and-falling-prices-expectations-for-the-domestic-natural-gas-boom/)

Moreover, the boom in domestic natural gas production could have even more immediate affects for U.S. electricity consumers. The increased supply of gas is expected to lower natural gas prices and retail electricity prices over the next 20 years, according to a [new RFF Issue Brief](http://www.rff.org/Publications/Pages/PublicationDetails.aspx?PublicationID=22019). These price decreases are expected to be even larger if demand for electricity continues on a slow-growth trajectory brought on by the economic downturn and the increased use of energy efficiency.For example, RFF analysis found that delivered natural gas prices would have been almost 35% higher in 2020 if natural gas supply projections had matched the lower estimates released by the U.S. Energy Information Administration (EIA) in 2009. Instead, with an increased gas supply, consumers can expect to pay $4.9 per MMBtu for delivered natural gas in 2020 instead of $6.6 per MMBtu. These trends are even more exaggerated if demand for electricity were to increase to levels projected by the EIA just three years ago, in 2009.This decrease in natural gas prices is expected to translate into a decrease in retail electricity prices for most electricity customers in most years out to 2020. Compared to the world with the lower gas supply projections, average national electricity prices are expected to be almost 6% lower, falling from 9.25 cents to 8.75 cents per kilowatt-hour in 2020. Residential, commercial, and industrial customers are all expected to see a price decrease, with the largest price changes occurring in parts of the country that have competitive electricity markets. All of these prices decreases translate into real savings for most electricity customers. The savings are largest for commercial customers, who stand to save $33.9 Billion (real $2009) under the new gas supply projections in 2020. Residential customers also stand to save big, with estimates of $25.8 Billion (real $2009) in savings projected for 2020.

#### New wind capacity jacks electricity prices

Bryce 11 (Robert, Senior Fellow @ Manhattan Institute, "The High Cost of Wind Energy as a Carbon-Dioxide Reduction Method," http://www.manhattan-institute.org/html/ib\_11.htm)

The Global Wind Energy Council (GWEC), an industry group, maintains that reducing the amount of carbon dioxide going into the atmosphere “is the most important environmental benefit from wind power generation.”[27] For its part, the American Wind Energy Association (AWEA), a national trade association, says “there is no need to wait for a new climate solution. Wind power is one of only a few near-term options to reduce emissions.”[28] In its 2008 report, the NREL claimed that if the United States were to derive 20 percent of its electricity from wind, it “could avoid approximately 825 million metric tons of carbon dioxide in the electric sector in 2030.”[29]¶ How does that 825 million tons of carbon dioxide compare with global emissions? In 2010, global carbon-dioxide emissions totaled 33.1 billion tons.[30] Thus, if the United States were somehow able to instantly increase its wind-generated electricity to 20 percent of total consumption, doing so might reduce global emissions by about 2.5 percent. But it is unlikely that global emissions will be the same in 2030 as they were in 2010. By 2030, the International Energy Agency (IEA) expects global emissions will total about 40.2 billion tons.[31] Thus, the 825 million tons that NREL claims might be reduced by achieving the “20 by ‘30” goal will result in a global reduction of just 2 percent.[32]¶ Therefore, to justify a total investment of $850 billion in wind, U.S. policymakers would have to agree that reducing carbon dioxide in the year 2030 is worth spending $1,030 per ton. Of course, that amount would not be spent all at once. Instead it would be allocated over the coming 19 years and would be, in effect, a carbon tax set at $54 per ton.¶ However, the actual cost may be somewhat lower. In its 2008 report, NREL claimed that only 305,000 megawatts of wind capacity would be needed to meet the “20 by ‘30” goal. Recall that the United States has built about 40,000 megawatts of wind capacity at a cost of about $68 billion. Thus, building an additional 265,000 megawatts of wind capacity (again, at $2.43 million per megawatt) at a cost of $644 billion, would lead to a total cost of $712 billion, thereby implying that cutting one ton of carbon dioxide by 2030 would cost about $863. Spread over the next 19 years, the cost would be the equivalent of a carbon levy set at $45 per ton.¶ Achieving the “20 by ‘30” goal will have a significant impact on electricity rates. In 2007, Steven Hayward and Kenneth Green of the American Enterprise Institute (AEI) estimated that a $15 carbon tax would likely increase the cost of coal-fired generation by about $0.0163 per kilowatt-hour. Therefore, we can assume that a carbon levy of $54-per-ton could increase electricity rates in coal-reliant regions by about $0.058 per kilowatt-hour. That’s a major increase given that the average price of electricity for residential consumers in the United States is currently $0.12 per kilowatt-hour.[33]¶ Put another way, if the United States were to achieve the “20 by ‘30” goal, U.S. residential electricity prices in coal-dependent regions could increase by about 48 percent over current levels. If we use the lower range of wind costs outlined by NREL in its 2008 report, and assume that reducing a ton of carbon by 2030 will cost $45 per year, the increase in electricity costs in coal-dependent areas will amount to about $0.049 per kilowatt-hour. That would result in an increase of 40 percent over current levels for residential customers in those regions.¶ These higher electricity costs will likely accelerate the pace of electric rate increases now underway around the country. Since 2004, the average cost of residential electricity has gone from $0.0895 per kilowatt-hour to $0.1218 per kilowatt-hour, an increase of 36 percent.[34]¶ Wind energy is not a cost-effective method of reducing carbon-dioxide emissions. Any effort—whether at the state level or the federal level—to dramatically increase the use of wind energy will result in a new tax on electricity consumers. If the United States were to achieve the “20 by ‘30” goal, the effective carbon tax of $45 to $54 per ton would far exceed any such tax regime currently in place. Further, if the stated goal were met by 2030, the likely reduction in carbon dioxide emissions would amount to just 2 percent of the expected global total.

#### That’s k2 manufacturing revitalization

Perry 7/31/12 (Mark, Prof of Economics @ Univ. of Michigan, "America's Energy Jackpot: Industrial Natural Gas Prices Fall to the Lowest Level in Recent History," http://mjperry.blogspot.com/2012/07/americas-energy-jackpot-industrial.html)

Building petrochemical plants could suddenly become attractive in the United States. Manufacturers will "reshore" production to take advantage of low natural gas and electricity prices. Energy costs will be lower for a long time, giving a competitive advantage to companies that invest in America, and also helping American consumers who get hit hard when energy prices spike.¶ After years of bad economic news, the natural gas windfall is very good news. Let's make the most of it." ¶ The falling natural gas prices also make the predictions in this December 2011 study by PriceWaterhouseCoopers, "Shale gas: A renaissance in US manufacturing?"all the more likely: ¶ U.S. manufacturing companies (chemicals, metals and industrial) could employ approximately one million more workers by 2025 because of abundant, low-priced natural gas.¶ Lower feedstock and energy cost could help U.S. manufacturers reduce natural gas expenses by as much as $11.6 billion annually through 2025.¶ MP: As I have emphasized lately, America's ongoing shale-based energy revolution is one of the real bright spots in an otherwise somewhat gloomy economy, and provides one of the best reasons to be bullish about America's future. The shale revolution is creating thousands of well-paying, shovel-ready jobs in Texas, North Dakota and Ohio, and thousands of indirect jobs in industries that support the shale boom (sand, drilling equipment, transportation, infrastructure, steel pipe, restaurants, etc.). In addition, the abundant shale gas is driving down energy prices for industrial, commercial, residential and electricity-generating users, which frees up billions of dollars that can be spent on other goods and services throughout the economy, providing an energy-based stimulus to the economy. ¶ Cheap natural gas is also translating into cheaper electricity rates, as low-cost natural gas displaces coal. Further, cheap and abundant natural gas is sparking a manufacturing renaissance in energy-intensive industries like chemicals, fertilizers, and steel. And unlike renewable energies like solar and wind, the natural gas boom is happening without any taxpayer-funded grants, subsidies, credits and loans. Finally, we get an environmental bonus of lower CO2 emissions as natural gas replaces coal for electricity generation. Sure seems like a win, win, win, win situation to me.

#### Econ decline risks extinction

Auslin 9 (Michael, Resident Scholar – American Enterprise Institute, and Desmond Lachman – Resident Fellow – American Enterprise Institute, “The Global Economy Unravels”, Forbes, 3-6, http://www.aei.org/article/100187)

What do these trends mean in the short and medium term? The Great Depression showed how social and global chaos followed hard on economic collapse. The mere fact that parliaments across the globe, from America to Japan, are unable to make responsible, economically sound recovery plans suggests that they do not know what to do and are simply hoping for the least disruption. Equally worrisome is the adoption of more statist economic programs around the globe, and the concurrent decline of trust in free-market systems. The threat of instability is a pressing concern. China, until last year the world's fastest growing economy, just reported that 20 million migrant laborers lost their jobs. Even in the flush times of recent years, China faced upward of 70,000 labor uprisings a year. A sustained downturn poses grave and possibly immediate threats to Chinese internal stability. The regime in Beijing may be faced with a choice of repressing its own people or diverting their energies outward, leading to conflict with China's neighbors. Russia, an oil state completely dependent on energy sales, has had to put down riots in its Far East as well as in downtown Moscow. Vladimir Putin's rule has been predicated on squeezing civil liberties while providing economic largesse. If that devil's bargain falls apart, then wide-scale repression inside Russia, along with a continuing threatening posture toward Russia's neighbors, is likely. Even apparently stable societies face increasing risk and the threat of internal or possibly external conflict. As Japan's exports have plummeted by nearly 50%, one-third of the country's prefectures have passed emergency economic stabilization plans. Hundreds of thousands of temporary employees hired during the first part of this decade are being laid off. Spain's unemployment rate is expected to climb to nearly 20% by the end of 2010; Spanish unions are already protesting the lack of jobs, and the specter of violence, as occurred in the 1980s, is haunting the country. Meanwhile, in Greece, workers have already taken to the streets. Europe as a whole will face dangerously increasing tensions between native citizens and immigrants, largely from poorer Muslim nations, who have increased the labor pool in the past several decades. Spain has absorbed five million immigrants since 1999, while nearly 9% of Germany's residents have foreign citizenship, including almost 2 million Turks. The xenophobic labor strikes in the U.K. do not bode well for the rest of Europe. A prolonged global downturn, let alone a collapse, would dramatically raise tensions inside these countries. Couple that with possible protectionist legislation in the United States, unresolved ethnic and territorial disputes in all regions of the globe and a loss of confidence that world leaders actually know what they are doing. The result may be a series of small explosions that coalesce into a big bang.

### 4

#### Text: The fifty state governments of the United States and all relevant territories should establish a producer payment for locally-owned wind power produced for on-site demand in the United States. This payment should be higher than the current Production Tax Credit rate for wind power.

#### States solve incentives for wind

Piscitello and Bogach 97 (E. Scott and V. Susan, “Financial Incentives for Renewable Energy Development”, 1997, pg. 33)

Financial incentives for renewable energy development in the United States are set at both the federal and **state levels**. In many cases, policy frameworks are set by the federal government with states required to design and implement policy details. As a result, financial incentive policies for renewable energy development in the United Slates vary greatly among individual states. States often formulate financial incentive policies to promote development of a resource within their particular borders, but which is not as prominent in other states (such as financial incentives for energy from biomass in Georgia, Alabama, and other states located in the southeastern United States). The State of California, however, developed strong financial incentive policies that have succeeded in promoting a broad range of renewable energy resources, including wind and solar resources. California was therefore chosen as a focus for the financial incentives offered for renewable energy development in the United States. Examples of incentives used in other states arc documented at the end of this section-In reaction to the oil crisis of the 1970s, the State of California adopted energy policies for (a) promoting energy diversity; (b) reducing dependence on fossil fuels; (c) using indigenous energy resources; and (d) promoting environmentally benign energy sources. These principles led to a series of financial incentive policies for renewable energy development that has resulted in significant installed capacity. By the early 1990s, renewable energy facilities comprised approximately 10 percent of the installed generating capacity in California Due to an oversubscription by renewable energy facilities in the late 1980s and 1990s, financial incentives for renewable energy development were removed. At the same time, California was and is continuing to move toward deregulating its electric utility industry. Despite uncertainties regarding future evolution of the deregulated industry, energy prices are expected to remain below those at which renewable energy facilities are financially viable- As a result, California is presently developing new financial incentives aimed at maintaining its existing renewable energy facilities as well as promoting further development of the most promising technologies in the deregulated power market.

#### There’s an advantage – the Aff reinforces centralization- turns case

Papworth 1 (John, Founding Editor – Fourth World Review, “Peace Through Social Empowerment”, 9-5, http://www.cesc.net/adobeweb/radcon/radical.pdf)

To state that humankind is at a crossroads which will determine whether in the immediate future civilisation will survive at all, is but a statement of the obvious: The imminent global threats of nuclear and biological war, the sustained barrage of environmental hooliganism now characteristic of industrialised societies, food prospects and population pressures, which can only herald an era of mass starvation or numbers decimated by disease, and the murder of man’s creative role in work and in social and political structures, should, if there were any common awareness or concern, be prompting a whole series of emergency conferences across the globe to meet the challenges they present. Instead, for the most part, there is ignorance, passivity, and unconcern at every level of society, whilst avarice in the name of economic management, and power-seeking in the name of government, bestrides the world like a colossus. Yet it must be said, and it is surely imperative to note, everywhere there are signs of life-affirmation against a prospect of what The Duke of Edinburgh has called ‘a winter of death’ to which he claims mankind is moving. Everywhere there is resistance, and the number of grass-roots organisations across the world which have been formed in recent decades to give voice to peoples’ concerns about the general drift of affairs now runs into many thousands. A great many of these organisations are focussed on the effects rather than the causes of the global crisis, so that we have organisations opposed to war, opposed to chemical farming, opposed to corporation-style capitalism, opposed to the europlot and to the 'Multilateral Agreement on Investment (MAI)', opposed to the destruction of the rain forests, opposed to oceanic over-fishing, opposed to big government oppression of small nations (Tibet, Chechnya, Kashmir, Kurdistan, etc, etc), opposed to gender discrimination, opposed to the animal cruelty implicit in factory farming, opposed to genetic engineering, opposed to large dams, opposed to armaments and so on and so on. The full list is as extensive as it is remarkable and commendable; indeed one cannot but be profoundly grateful that these numerous bodies exist at all. Yet it has to be said that overall they are having only a marginal effect on the general drift to disaster and the reason for this may well be because they are largely concerned with the effects of the abuses of power, abuses that have created the crisis, rather than its causes. All too often these multitudinous campaigns stem from a quite unfounded assumption that the problem does not lie in the general scale and structure of society, or in the general body of values on which it operates, but in the failure to adopt the particular reform the campaigners may have in view. This is the principle reason why all this diverse and altruistic activity, often promoted with tremendous idealism and devotion, is yielding so little of decisive effect. In consequence the global crisis does not abate, rather does it increase at an accelerating rate. Why? The Russian Revolution of 1917 was, after all, largely the work of a mere handful of dedicated zealots and is by no means an isolated example of how a tiny minority has succeeded in imposing itself on a huge majority. There is no call here for anyone to impose anything on anybody, but if the Bolsheviks initially lacked numbers they lacked neither clarity of aim, however mistaken, nor unity, however rigidly imposed, whereas today the movement for radical reform suffers both confusion of aim and a general lack of adherence to a common purpose. Is it possible that a firm affirmation of the imperative need for localised, non-centralised decision-making in village-sized communities across the globe, as being the indispensable basis for democratic government and democratic control of events, might repair these two lacks? PART IV. PRIMARY CAUSATIVE FACTORS In posing the question we are of course pointing to the need to grasp the real nature of the causes of the global crisis. What then are those causes? We are concerned to locate here but one. Every former age can show how power has been abused to one degree or another, what is singular about the modern era is the sheer scale of that abuse; it is a scale which, armed with a vast panoply of chemical and mechanical invention, is able to dominate citizen life right down to the minutest particulars as never before. The power implied here, as indicated above, is on so enormous a scale as to be out of control, it is running amok and creating crisis situations in almost every sphere of human experience and endeavour. One of the major defects of so many organisations seeking to arrest the ensuing effects of the abuses of power is just that. So often they are seeking to restore a status quo ante, a status that produced the problem in the first place. We need to see that the massive abuses of power now dominating human affairs have their origins in the destruction of genuine peoples’ power, power at the smallest level of society, in the village, the neighbourhood, the community or whatever name we choose to give it; power which was frequently expressed in work, in localised trading, in relationships and in a wide range of social usages, common understandings and adherence to a common code of moral principle. Our prospects of countering the evil forces promoting the global crisis and of making any significant progress are bleak indeed if we do not grasp that if people have no real power to enable their moral judgements to be reflected in the general life processes of their own communities, if they do not themselves control their social structures, their schools, post office, bank, police, hospital, transport and their welfare services; if they have no local power to determine these matters, if they do not have their own locally elected representatives to sit, with others similarly elected, on boards which govern matters of wider import, including public utilities such as water, gas, electricity and not least, governing the content of radio and television, they have no effective power at all. The very structures disempower them and it is a mere abuse of language to describe any such process as democratic. Democracy, we should never cease to hold, does not mean government of the people, nor government for the people, both are essentially totalitarian concepts, it means government by the people. All else is claptrap and delusion. Once the power of people to make decisions at community level is nullified by shunting that power to ever larger centres of administration and control, then what becomes determinative is not the will of the people but factors attendant on the pursuit of power, whether in terms of place, profit or prestige, as an end in itself. . Supposing then our reform movements changed tack? Supposing they tackled the problem of giantism and of excessive size in order to restore control of affairs back in citizen hands? And suppose all these reform and protest organisations joined hands to do so? What then would be involved? They would be agents of the most thoroughgoing and peaceful revolution the world has ever seen. A revolution not to capture power but to dissolve it. To dissolve it into people’s hands where it rightly belongs in the manifold neighbourhoods, villages, parishes and human scale political structures throughout the world. They would be putting paid to the absurd notion that the citizen can have a meaningful voice or influence in political parties or in governments so enormous as to make it inevitable that power will be in the hands of those who are controlling things at the centre, a control which ensures that they control the party conferences, agendas, policies, candidate lists and so on. So persuasive is the power of established practice, and the powerful propaganda that accompanies it in asserting the natural and inevitable validity of our current institutions, that it requires a real effort of mind to recognise that far from being natural or inevitable they are neither. They are based in fact on quite unsustainable assumptions and not least of these assumptions relates to current scheming and plotting (it really is nothing less) to unite Europe under one Brussels-dominated Government. Foremost, with the horrific tragedy of two world wars uppermost in mind, there is the assumption that a united ‘Europe’ will achieve peace. Will it? Can it? The mere supposition that it can and will ignores the lessons of all the other giant federations already in existence. Have any one of them achieved peace? The USA, the most powerful of them all, has been involved in every major war of the 20th century. Is it likely that it will prove any more peaceful in the 21st? India, to take another example, despite its crippling poverty, since the transfer of colonial power from Westminster to Delhi, has had a military confrontation with every one of its neighbours. China, to take another, despite numerically being the largest state on earth yet sees fit to invade and subjugate the ancient peoples of Tibet. Russia, like all other monster states, is armed to the eyebrows with nuclear weapons and is even now waging a genocidal war against the people of the independent state of Chechnya. Brazil, to take yet another monster, is busy destroying the priceless human heritage of its rain forests, its government operates in a morass of drug-related and other forms of corruption and if it has yet to be a threat to peace beyond its borders it is only because it currently lacks the means to mount one. Is there anyone sanguine enough to suppose a united ‘Europe’ will behave differently? Its government is already a byword for corruption on a scale even the USA finds difficult to rival, and already its leading voices are urging the need for an ‘European’ army. None of this should surprise any intelligent observer; the birth of ‘Europe’ has been accomplished, insofar as it has yet succeeded, by a team of midwives difficult to distinguish from a bunch of crooks. But, we are assured, ‘Europe’ is the path to prosperity. It will be noted that the assurance is based on the supposition that a continuance of current policies of economic growth have any vestige of moral validity, or that to achieve globally the material consumption standards of an average U.S household would not require the resources of several more planets. But if uniting Europe will achieve prosperity where is the evidence? Are there any lessons to be learned here from the world’s existing giant federations? The USA is undoubtedly, in terms of per capita gross national product, the wealthiest nation the world has ever seen, but is it a form of riches, given the environmental holocaust it has engendered to achieve it, one which others ought to pursue? We may also ignore that two million of its citizens are in prison, but can we ignore its millions who live below the poverty line and that their numbers are growing? For that matter, are the other giants shining examples of economic prosperity, even assuming the forms of prosperity on offer are worthy moral objectives? Against the fact that both China and India, in per capita GDP terms, are both at the bottom of the global league table, we have to ask, why it is that of the top forty of the richest states on earth thirty have populations of less than ten million? Small may not always be beautiful, sometimes indeed it can be quite horrible, but the evidence suggests it is far more likely to be prosperous, whilst big is showing itself to be increasingly mad. This does not mean that in a world of small nations, themselves devolving power to village or urban ward level, all problems will be solved and that we shall have ushered in an era of perpetual peace, progress and happiness. Human beings are not perfect and any system of government however well contrived, will always reflect some of those imperfections. What it does mean is that if power to decide is restored to the citizen then the citizen’s moral and aesthetic judgements will then become influential, and even perhaps determinative, in the shaping of events. Not lease, small-scale government will ensure that any abuses will tend to be of limited impact. There is often a disposition to swallow wholesale the notion that the ordinary citizen does not have the knowledge or the capacity to make decisions on complex issues and that such matters are best left to experts, and that anyway administration on a large scale is cheaper and more efficient. Against this the citizen needs to ask what empowered and largely self-governing human scale community would allow nuclear bombs or nuclear energy to be produced on its territory? Or allow genetic engineering to proceed? Or car production and motorways to have precedence over public transport? Or allow its local shops to be driven out of business by giant ‘super’ markets (it is the profits which are ‘super’)? Or permit the closure of its local hospital or post office? Or allow its schools to be run by people who are not members of the community? Or permit chemical farming and factory type rearing of animals under cruelly intensive conditions? Our society abounds with abuses of power in every direction, so that the list of these questions could be extended indefinitely; the people who take up the cudgels to oppose these and other evil developments are to be applauded, but what the wide range of the questions they themselves have raised suggests is a conclusion which may often be beyond their horizons. It is simply this; that our primary problem is not war, or the environment, or population pressures, nor the squandering of the planet’s finite resources, nor the alienation from life of many millions of people; the primary problem is that of size, size developed on such a scale as to disempower people and which makes their moral judgements irrelevant to the passage of events. If we ignore that and simply focus our energies on particular abuses then, however commendable our objectives and our efforts, we are dealing with the effects of the abuses of power and ignoring their causes. It was Einstein who remarked ‘You cannot solve a problem with the mindframe that has created it’. In saying as much he was pointing to the core of our problem; a 19th century mindframe which accepts, without question or challenge, giant centralised states and economic entrepreneurship global in its scope, which together have created a doomsday scenario for the human race. No body can be healthier than the cells of which it is comprised. If the cells of small-scale community life are debilitated or non-existent in the body politic then what we are confronted with is a form of social and political leukaemia, a destroyed immune system which cannot prevent multitudinous forms of life-threatening malignancy, such as monster global wars, from flourishing. We are not going to solve the problems of the 21st century with the mind-frame of the 19th. Social empowerment, involving the deliberate creation of an organic, multi-cellular structure and process of our political and economic institutions, is today the only realistic path to enduring peace and to any genuine social progress.

### 5

#### The United States federal government should establish a producer payment for locally-owned solar power produced for on-site demand in the United States. This payment should be higher than the current Production Tax Credit rate for wind power.

#### Local solar solves best

Pierce 10 [James Pierce, Eric Paulos, researcher and Cooper-Siegel Endowed Chair at the Human-Computer Interaction Institute, Carnegie Mellon University “Materializing energy”, <http://www.paulos.net/papers/2010/MaterializingEnergy_DIS2010.pdf>]

Designing for energy engagement and attunementEnergy engagement could be a powerful way of transforming our relationships with energy in more meaningful and sustainable ways. In terms of materializing energy through engagement with energy devices, designers can aim to design technologies with and through which limiting the availability of energy is not perceived of as increased effort but rather as focal engagement. Consider a decentralized energy scenario in which a micro-wind generator is situated atop the roof of ones house or a local community wind farm is shared by members of a city. In this case, *shifting* [23] the practice of laundering to moments when the wind is blowing may be perceived not as unpleasant effortful engagement but rather as meaningful focal engagement with ones technology and electricity, home and community, wind and world. Similarly, microgenerated solar power could help mediate focal engagement with the sun and solar generated electricity leading to individuals turning off indoor lights when they are not being used. As suggested by one participant it could be like “tending to your solar garden.” In terms of rematerializing energy through reengagement with simpler things, designers can design for the replacement or displacement of energy-consuming devices in favor of rematerializing focal things such as hand tools that require only human bodily energy to function. To continue with the above examples, engagement with “local” wind and solar energy could promote displacing the automatic clothes dryer in favor of air drying clothes or displacing indoor lights during the daytime in favor of natural lighting. Services and systems could be cleverly designed to build on the engagement mediated by solar panels between individuals and the sun and the natural rhythms of the seasons, perhaps helping to rematerialize farming and passive solar heating practices.

#### China’s beating the US in wind development now---it’s key to their overall clean-tech leadership---the plan reverses this

Zoninsein 10 Manuela is a writer for Climatewire, New York Times. “Chinese Offshore Development Blows Past U.S.,” Sept 7, <http://www.nytimes.com/cwire/2010/09/07/07climatewire-chinese-offshore-development-blows-past-us-47150.html?pagewanted=all>

As proposed American offshore wind-farm projects creep forward -- **slowed by** state legislative debates, **due diligence and environmental impact assessments** -- China has leapt past the United States, installing its first offshore wind farm. Several other farms also are already under construction, and even the Chinese government's ambitious targets seem low compared to industry dreaming. "What the U.S. doesn't realize," said Peggy Liu, founder and chairwoman of the Joint U.S.-China Collaboration on Clean Energy, is that China "is going from manufacturing hub to the clean-tech laboratory of the world." The first major offshore wind farm outside of Europe is located in the East China Sea, near Shanghai. The 102-megawatt Donghai Bridge Wind Farm began transmitting power to the national grid in July and signals a new direction for Chinese renewable energy projects and the initiation of a national policy focusing not just **on wind** power, but increasingly on the offshore variety. Moreover, "it serves as a showcase of what the Chinese can do offshore ... and it's quite significant," said Rachel Enslow, a wind consultant and co-author of the report "China, Norway and Offshore Wind Development," published in March by Azure International for the World Wildlife Fund Norway.

#### Chinese clean tech leadership is key to their economy, internal stability, and solves extinction

Paul Denlinger 10, consultant specializing in the China market who is based in Hong Kong, 7/20/10, “Why China Has To Dominate Green Tech,” http://www.forbes.com/sites/china/2010/07/20/why-china-has-to-dominate-green-tech/

On the policy level, the Chinese government has to perform a delicate balancing act, it has to balance the desire of many Chinese to live a Western lifestyle, together with its high energy consumption and waste, with the need to preserve the environment, since China, and the world, would suffer enormous damage if 1.3 billion people got all their energy needs from coal and oil, the two most widely used fossil fuels. China’s political and social stability depends on finding the right balance, since the party has an implicit mandate: it will deliver economic growth to the Chinese people. This is why the Chinese government has chosen to invest in developing new green energy technology. The country is very fortunate in that most of the discovered deposits of rare earths used in the development of new technologies are found in China. While these deposits are very valuable, up until recently, the industry has not been regulated much by the Chinese central government. But now that Beijing is aware of their importance and value, it has come under much closer scrutiny. For one, Beijing wants to consolidate the industry and lower energy waste and environmental damage. (Ironically, the rare earth mining business is one of the most energy-wasteful and highly polluting industries around. Think Chinese coal mining with acid.) At the same time, Beijing wants to cut back rare earth exports to the rest of the world, instead encouraging domestic production into wind and solar products for export around the world. With patents on the new technology used in manufacturing, China would control the intellectual property and licensing on the products that would be used all over the world. If Beijing is able to do this, it would control the next generation of energy products used by the world for the next century. That is the plan. It would be like if the oil-producing nations in the 1920s and 1930s said that they didn’t need Western oil exploration firms and refineries to distribute oil products; they would do all the processing themselves, and the Western countries would just order the finished oil products from them. This is how China obviously plans to keep most of the value-added profits within China’s borders. Before any Western readers snap into “evil Chinese conspiracy to take over the world” mode, it’s worth pointing out that Chinese rare earth experts and government officials have repeatedly warned Western visitors that this policy change would be introduced. Unfortunately, these warnings have gone largely unheeded and ignored by the Western media and politicians who, it seems, have been largely preoccupied by multiple financial crises and what to do about the West’s debt load. The debt crisis in the West means that it is very hard for Western green energy companies to find financing for their technologies, then to market them as finished products. New energy technologies are highly risky, and initial investments are by no means guaranteed. Because they are considered high-risk and require high capital expenditure (unlike Internet technologies which are very cheap and practically commoditized), banks are reluctant to finance them unless they are able to find government-secured financing. Because most U.S. banks are recapitalizing their businesses after the debt bubble burst, there are very few, if any western banks who will finance new green energy technologies. This has opened a window of opportunity for the Chinese government to finance, and for Chinese technology companies to develop, then manufacture these new green products. But just making these technologies is not enough; they need to be competitive against traditional fossil fuels. When it comes to the amount of energy released when coal or oil is burned, the new green technologies are still way behind. This means that, at least in the early stages of adoption, Chinese businesses will still be reliant on coal and oil to bridge that energy chasm before the new energy technologies become economically competitive. Much depends on how much the Chinese government is willing to spend to promote and incentivize these new technologies, first in China, then overseas. Because of China’s growing energy demands, we are in a race for survival. The 21st century will be remembered as the resurgent coal and oil century, or as the century humanity transitioned to green technologies for energy consumption. While China is investing heavily now in green tech, it is still consuming ever larger amounts of coal and oil to drive its economic growth. Right now, we all depend on China’s success to make the transition to green energy this century. For all practical purposes, we’re all in the same boat.

### Case

#### Epistemology doesn’t come first

**Owens 2002** (David – professor of social and political philosophy at the University of Southampton, Re-orienting International Relations: On Pragmatism, Pluralism and Practical Reasoning, Millenium, p. 655-657)

Commenting on the ‘philosophical turn’ in IR, Wæver remarks that ‘[a] frenzy for words like “epistemology” and “ontology” often signals this philosophical turn’, although he goes on to comment that these terms are often used loosely.4 However, loosely deployed or not, it is clear that debates concerning ontology and epistemology play a central role in the contemporary IR theory wars. In one respect, this is unsurprising since it is a characteristic feature of the social sciences that periods of disciplinary disorientation involve recourse to reflection on the philosophical commitments of different theoretical approaches, and there is no doubt that such reflection can play a valuable role in making explicit the commitments that characterise (and help individuate) diverse theoretical positions. Yet, such a philosophical turn is not without its dangers and I will briefly mention three before turning to consider a confusion that has, I will suggest, helped to promote the IR theory wars by motivating this philosophical turn. The first danger with the philosophical turn is that it has an inbuilt tendency to prioritise issues of ontology and epistemology **over explanatory** and/or interpretive **power** as if the latter two were merely a **simple function** of the former. But while the explanatory and/or interpretive power of a theoretical account is not wholly independent of its ontological and/or epistemological commitments (otherwise criticism of these features would not be a criticism that had any value), **it is by no means clear that it is**, in contrast, wholly dependent **on these philosophical commitments**. Thus, for example, one need not be sympathetic to rational choice theory to recognise that it can provide powerful accounts of certain kinds of problems, such as the tragedy of the commons in which dilemmas of collective action are foregrounded. It may, of course, be the case that the advocates of rational choice theory cannot give a good account of why this type of theory is powerful in accounting for this class of problems (i.e., how it is that the relevant actors come to exhibit features in these circumstances that approximate the assumptions of rational choice theory) and, if this is the case, it is a philosophical weakness—but **this does not undermine** the point that, for a certain class of problems, rational choice theory may provide the best account available to us. In other words, while the critical judgement of theoretical accounts in terms of their ontological and/or epistemological sophistication is one kind of critical judgement, **it is not the only or even necessarily the** most important kind. The second danger run by the philosophical turn is that because prioritisation of ontology and epistemology promotes theory-construction from philosophical first principles, it cultivates a theory-driven rather than problem-driven approach to IR. Paraphrasing Ian Shapiro, the point can be put like this: since it is the case that there is always a plurality of possible true descriptions of a given action, event or phenomenon, the challenge is to decide which is the most apt in terms of getting a perspicuous grip on the action, event or phenomenon in question given the purposes of the inquiry; yet, from this standpoint, ‘theory-driven work is part of a reductionist program’ in that it ‘dictates always opting for the description that calls for the explanation that flows from the preferred model or theory’.5 The justification offered for this strategy rests on the mistaken belief that it is necessary for social science because general explanations are required to characterise the classes of phenomena studied in similar terms. However, as Shapiro points out, this is to misunderstand the enterprise of science since ‘whether there are general explanations for classes of phenomena is a **question for social-scientific inquiry**, not to be prejudged before conducting that inquiry’.6 Moreover, this strategy easily slips into the promotion of the pursuit of generality over that of empirical validity. The third danger is that the preceding two combine to encourage the formation of a particular image of disciplinary debate in IR—what might be called (only slightly tongue in cheek) ‘the Highlander view’—namely, an image of warring theoretical approaches with each, despite occasional temporary tactical alliances, dedicated to the strategic achievement of sovereignty over the disciplinary field. It encourages this view because the turn to, and prioritisation of, ontology and epistemology stimulates the idea that there can only be one **theoretical approach which gets things right**, namely, the theoretical approach that gets its ontology and epistemology right. This image feeds back into IR exacerbating the first and second dangers, and so a potentially vicious circle arises.

**Role of the ballot is the aff vs. competitive policy option- any other reason to vote aff is extra topical and a voting issue**

#### Movements that operate outside the state empirically fail

Grossberg, Communications Professor, University of Illinois, 92(Lawrence, WE’VE GOTTA GET OUT OF THIS PLACE, 1992, p. 390-1)

But this would mean that the Len could not remain outside of the systems of governance. It has sometimes to work with, against and with in bureaucratic svstems of governance. Consider the case of Amnesty International, an immesely effective organization when its major strategy was (similar to thal of the Right) exerting pressure directly on the bureaucracies of specific governments. In recent years (marked by the recent rock tour), it has apparently redirected its energy and resources, seeking new members (who may not be committed to actually doing anything; membership becomes little more than a statement of ideological support for a position that few are likely to oppose) and public visibility. In stark contrast, the most effective struggle on the Leftin recent times has been the dramatic (and, one hopes continuing) **dismantling of apartheid in South Africa**. It was accomplished by mobilizing popular pressure on the institutions and bureaucracies of economic and governmental institutions and it depended on a highly sophisticated organizational structure. The Left too often thinks that it can end racism and sexism and classism by changing people's attitudes and everyday practices (e.g. the I990 Black boycott of Korean stores in New York). Unfortunately, while such struggles may be extremely visible. they are often less effective than attempts to move the institutions (e.g.,banks, taxing structures, distributors) which have put the economic relations of black and immigrant populations in place and which condition people's everyday practices. **The Left needs institutions which can operate within the system of governance, understanding that such institutions are the mediating structures by which power is actively realized**. It is often by directing opposition against specific institutions that power can be channelled. The Left assumed for some time now that, since it has so little access to the apparatuses of agency, its only alternative is to seek a public voice in the media through tactical protests. The Left does in fact need more visibility, but it also needs greater access to the **entire range of apparatuses** **of decision making power.** Otherwise the Left has nothing but its own self-righteousness. It is not individuals who have produced starvation and the other social disgraces of our world, although it is individuals who must take responsibility for eliminating them. But to do so, they must act with organizations, and within the systems of organizations which in fact have the capacity (as well as responsibility) to fight them.

**No evidence indicates they’d take up the incentives- if coal is cheaper and easier like it is now they’d stay with that**

**Increasing civic involvement replicates their harms- causes cultural hegemony**

**Glass, 03**, Professor of Government and Politics at the University of Maryland [James, “Civil Society: The Unanswered Question of Where Power Resides”, The Good Society, projectmuse]

Proponents of civil society assume that where association lies, power follows. Yet, power resides in social and cultural sites that have little to do with formal institutions of political power and the political functions of voluntary associations. The Aristotelian virtue of participation (at the heart of the literature extolling the democratic benefits of association) guards against tyranny in public institutions; but power also moves along cultural grids which have little attachment to public or governmental structure, power that works on the self in everyday life, power that ministers to the body, its regulation and treatment, its containment and confinement. That kind of power, with sites deep in cultural and social practice, supported by strong belief and entrenched knowledge, scrutinizes and disciplines individual and group behavior. It is power that rarely appears in the deliberations and programs of those secondary associations de Tocqueville found critical to the vibrant democratic life of America. Participation may not be a totally accurate index for measuring the health of American democracy; it may even, as Nancy Rosenblum argues in Membership and Morals: the Personal Uses of Pluralism in America (1998), move against the bulwarks of liberal value and democratic right. She finds danger in the "undisciplined multiplicity of associations that amplify self-interest, encourage errant interest group politics, and exaggerate cultural egocentrism" (1998, 32). The competitive demands of association, their narcissism and self-centeredness may work against the interests of a liberal, open and tolerant political environment. This is not always the case, but participation, she maintains, is not an uncomplicated blessing; it brings its own troubles. Ernest Gellner (1994) celebrates civil society in establishing democracies in Eastern Europe; associations provided an alternative method of political voice to single party regimes. Yet, American democracy developed in the midst of liberal assumptions about property and wealth; and expansion of the franchise and the extension of rights to previously excluded groups occurred against the backdrop of a liberalism zealous in its protection of property rights and individual prerogative, and, at least through the mid-twentieth century, notoriously insensitive to issues of race and racial violence. Voluntary associations flourished in this competitive and contingent world of possessors, doers and aspiring capitalists. However, it is not at all clear that membership in these associations "improved" moral character or elevated the level of democracy's ethical life. Rosenblum, for example, questions the Aristotelian assumption that participation enriches moral character. "The existence of a dense array of associations," she argues, "may fail to contribute to the moral uses of pluralism" (1998, 46). Further, the groupishness of voluntary associations may submerge individual identity, leading to "self-inflation" and a corresponding damage to "moral personality" (1998, 62), real consequences for democratic rights and the protection of the individual. Further, civil association might in some contexts exercise a negative impact on individual freedom and the protection of rights. For example, in the Germany of the 1930s and 1940s, a number of associations supported and administered race-based action whose impact lay in radical exclusion. Medical, legal, technical and civil associations established race-based criteria for inclusion or exclusion whose impact lay in redefining the moral compass of the entire culture. Civility for most Germans included harassing Jews and gypsies, appropriating property and restricting employment opportunities. The entire range of voluntary associations standing between the state and the individual worked for the interest of a racial ideology that defined the Jews as "life unworthy of life." This moral environment, legitimating exclusion and later, killing, became the defining standard not only for the political apparatus, but for the social world of groups that enabled this apparatus to operate. The race ideology systematically elaborated within Germany's scientific, medical and political establishment, argued that blood contamination constituted a grave threat to national culture and the boundaries of political society.

#### No internal link to government corruption- we can just vote them out of office

#### Value to life can’t be calculated

Schwartz 2 (Lisa, M.D., Associate Professor of Medicine – Dartmouth College Medical School, et al., Medical Ethics: A Case Based Approach, www.fleshandbones.com/readingroom/pdf/399.pdf)

The first criterion that springs to mind regarding the value of life is usually the quality of the life or lives in question: The quality of life ethic puts the emphasis on the type of life being lived, not upon the fact of life. Lives are not all of one kind; some lives are of great value to the person himself and to others while others are not. What the life means to someone is what is important. Keeping this in mind it is not inappropriate to say that some lives are of greater value than others, that the condition or meaning of life does have much to do with the justification for terminating that life.1 Those who choose to reason on this basis hope that if the quality of a life can be measured then the answer to whether that life has value to the individual can be determined easily. This raises special problems, however, because the idea of quality involves a value judgment, and value judgments are, by their essence, subject to indeterminate relative factors such as preferences and dislikes. Hence, quality of life is difficult to measure and will vary according to individual tastes, preferences and aspirations. As a result, no general rules or principles can be asserted that would simplify decisions about the value of a life based on its quality.

#### Plan isn’t sufficient – government would still be in power – they’d be able to crack down

#### Extinction outweighs

Bok 88

(Sissela, Professor of Philosophy at Brandeis, Applied Ethics and Ethical Theory, Rosenthal and Shehadi, Ed.)

The same argument can be made for Kant’s other formulations of the Categorical Imperative: “So act as to use humanity, both in your own person and in the person of every other, always at the same time as an end, never simply as a means”; and “So act as if you were always through your actions a law-making member in a universal Kingdom of Ends.” No one with a concern for humanity could consistently will to risk eliminating humanity in the person of himself and every other or to risk the death of all members in a universal Kingdom of Ends for the sake of justice. To risk their collective death for the sake of following one’s conscience would be, as Rawls said, “irrational, crazy.” And to say that one did not intend such a catastrophe, but that one merely failed to stop other persons from bringing it about would be beside the point when the end of the world was at stake. For although it is true that we cannot be held responsible for most of the wrongs that others commit, the Latin maxim presents a case where we would have to take such responsibility seriously – perhaps to the point of deceiving, bribing, even killing an innocent person, in order that the world not perish. To avoid self-contradiction, the Categorical Imperative would, therefore, have to rule against the Latin maxim on account of its cavalier attitude toward the survival of mankind. But the ruling would then produce a rift in the application of the Categorical Imperative. Most often the Imperative would ask us to disregard all unintended but foreseeable consequences, such as the death of innocent persons, whenever concern for such consequences conflicts with concern for acting according to duty. But, in the extreme case, we might have to go against even the strictest moral duty precisely because of the consequences. Acknowledging such a rift would post a strong challenge to the unity and simplicity of Kant’s moral theory.

**Can’t solve cities- communities would replicate the problem if they have to work together- someone would be in charge still**

#### War causes structural violence – not the other way around

**Goldstein 1** (Joshua, Professor of International Relations – American University, War and Gender: How Gender Shapes the War System and Vice Versa, p. 412)

First, peace activists face a dilemma in thinking about causes of war and working for peace. Many peace scholars and activists support the approach, “if you want peace, work for justice.” Then, if one believes that sexism contributes to war one can work for gender justice specifically (perhaps among others) in order to pursue peace. This approach brings strategic allies to the peace movement (women, labor, minorities), but rests on the assumption that injustices cause war. **The evidence** in this book **suggests that causality runs** at least as **strongly the other way**. War is not a product of capitalism, imperialism, gender, innate aggression, or any other single cause, although all of these influence wars’ outbreaks and outcomes. Rather, war has in part fueled and sustained these and other injustices.9 So, “if you want peace, work for peace.” Indeed, if you want justice (gender and others), work for peace. Causality does not run just upward through the levels of analysis, from types of individuals, societies, and governments up to war. It runs downward too. Enloe suggests that changes in attitudes towards war and the military may be the **most important way** to “reverse women’s oppression.” The dilemma is that peace work focused on justice brings to the peace movement energy, allies, and moral grounding, yet, in light of this book’s evidence, the emphasis on injustice as the main cause of war seems to be **empirically inadequate**.

**Just because they make wind simpler doesn’t solve the impact- still will be government beauracracy**

#### No solvency – even if it’s complex and uncertainty, status quo social science is the only game in town.

**Miller 2002** (Katherine Miller – Professor of Communication at Texas A & M, Communication theories: Perspectives, processes, and contexts, p. 35-36)

Epistemology and Axiology Post-positivist assumptions about the grounds of social knowledge and the role of values in the production of social knowledge are also based largely on the objectivist tenets we discussed in Chapter 2. These assumptions include the three interlinked notions that (a) knowledge can best be gained through a search for regularities and causal relationships among components of the social world, (b) regularities and causal relationships can best be discovered if there is a complete separation between the investigator and the subject of the investigation, and (c) this separation can be guaranteed through the use of the scientific method. As they have done with ontological assumptions of realism, however, most post-positivist scholars in communication today have tempered these epistemological and axiological bases to what Guba (1990a) has termed modified objectivist. Post-positivist theorists generally hold to the first assumption mentioned in the preceding paragraph. That is, the search for knowledge remains centered on causal explanations for regularities observed in the physical and social world. This is clearly consistent with the ontological position outlined previously. It should be noted, though, that the regularities and causal relationships studied by post-positivist scholars today are rarely simplistic and often involve a multiplicity of factors and over-time relationships (see K. I. Miller, 2001, for examples in organizational communication). Beyond this first assumption, however, post-positivists have largely rejected the second assumption, regarding the necessary distinction between knower and known. Instead, many post-positivists have concluded that "the hope for a formal method, capable of being isolated from actual human judgment about the content of science (that is, about the nature of the world), and from human values seems to have evaporated" (H. Putnam, 1981, p. 192). Because this assumption of value-free inquiry is rejected, post-positivists have similarly rejected blind obedience to the scientific method. Instead, objectivity is seen as a regulatory ideal. In other words, a post-positivist will use methods that strive to be as unbiased as possible and will attempt to be aware of any values that might compromise neutrality However, because the possible fallabilities of the scientific method are recognized, the post-positivist will also rely on the critical scrutiny of a community of scholars in order to safeguard objectivity and maximize the growth of social scientific knowledge. Thus, though no claims to absolute truth and value-free inquiry are made, the belief exists that progress can be made if researchers exercise care in their theorizing and research and are critical of theoretical assertions and empirical justifications. As Phillips (1990) summarizes, The ideal that is embraced seems to be this: Seekers after enlightenment in any field do the best that they can; they honestly seek evidence, they critically scrutinize it, they are (relatively) open to alternative viewpoints, they take criticism (fairly) seriously and try to profit from it, they play their hunches, they stick to their guns, but they also have a sense of when it is time to quit. It may be a dirty and hard and uncertain game, but with no fixed algorithms to determine progress, it is the only game in town.

#### **Complexity theory is wrong - linear solutions empirically are effective - the alternative dooms the world**

Kurasawa 4 (Professor of Sociology, York University of Toronto, Fuyuki, Constellations Volume 11, No 4, 2004).

Moreover, keeping in mind the sobering lessons of the past century cannot but make us wary about humankind’s supposedly unlimited ability for problemsolving or discovering solutions in time to avert calamities. In fact, the historical track-record of last-minute, technical ‘quick-fixes’ is hardly reassuring. What’s more, most of the serious perils that we face today (e.g., nuclear waste, climate change, global terrorism, genocide and civil war) demand complex, sustained, long-term strategies of planning, coordination, and execution. On the other hand, an examination of fatalism makes it readily apparent that the idea that humankind is doomed from the outset puts off any attempt to minimize risks for our successors, essentially condemning them to face cataclysms unprepared. An a priori pessimism is also unsustainable given the fact that long-term preventive action has had (and will continue to have) appreciable beneficial effects; the examples of medical research, the welfare state, international humanitarian law, as well as strict environmental regulations in some countries stand out among many others. The evaluative framework proposed above should not be restricted to the critique of misappropriations of farsightedness, since it can equally support public deliberation with a reconstructive intent, that is, democratic discussion and debate about a future that human beings would freely self-determine. Inverting Foucault’s Nietzschean metaphor, we can think of genealogies of the future that could perform a farsighted mapping out of the possible ways of organizing social life. They are, in other words, interventions into the present intended to facilitate global civil society’s participation in shaping the field of possibilities of what is to come. Once competing dystopian visions are filtered out on the basis of their analytical credibility, ethical commitments, and political underpinnings and consequences, groups and individuals can assess the remaining legitimate catastrophic scenarios through the lens of genealogical mappings of the future. Hence, our first duty consists in addressing the present-day causes of eventual perils, ensuring that the paths we decide upon do not contract the range of options available for our posterity.42 Just as importantly, the practice of genealogically inspired farsightedness nurtures the project of an autonomous future, one that is socially self-instituting. In so doing, we can acknowledge that the future is a human creation instead of the product of metaphysical and extra-social forces (god, nature, destiny, etc.), and begin to reflect upon and deliberate about the kind of legacy we want to leave for those who will follow us. Participants in global civil society can then take – and in many instances have already taken – a further step by committing themselves to socio-political struggles forging a world order that, aside from not jeopardizing human and environmental survival, is designed to rectify the sources of transnational injustice that will continue to inflict needless suffering upon future generations if left unchallenged.

#### Doesn’t take out our da’s- A strong internal link and uniqueness story solves

**Berube 2000** (David – Associate Professor of Speech Communication and Director of Debate at the University of South Carolina, Debunking Mini-Max Reasoning, Contemporary Argumentation and Debate, p. 64-65)

If extended arguments using mini-max reasoning is so indefensible, what can we do? Surprisingly, the answer is quite a lot. As a starting point, we need to reject the notion that contest debating would be impossible without them. We could demand a greater responsibility on the part of arguers making mini-max claims (a subject approached below). Debaters could use their plans and counterplans to stipulate the internal link and uniqueness stories for their extended arguments, consequently focusing the debate on probability assessment and away from exaggerated impacts. Alternatively, debaters may select to discuss ideas as we have seen in the recent trend toward kritik debating.

#### complexity theory fails- causes policy paralysis

**HENDRICK ‘9** (Diane; Department of Peace Studies – University of Bradford, “Complexity Theory and Conflict Transformation: An Exploration of Potential and Implications,” June, <http://143.53.238.22/acad/confres/papers/pdfs/CCR17.pdf>)

It is still relatively early days in the application of complexity theory to social sciences and there are doubts and criticisms, either about the applicability of the ideas or about the expectations generated for them. It is true that the translation of terms from natural science to social science is sometimes contested due to the significant differences in these domains, and that there are concerns that the meanings of terms may be distorted, thus making their use arbitrary or even misleading. Developing new, relevant definitions for the new domain applications, where the terms indicate a new idea or a new synthesis that takes our understanding forward, are required. In some cases, particular aspects of complexity theory are seen as of only limited applicability, for example, self-organisation (see Rosenau‘s argument above that it is only relevant in systems in which authority does not play a role). There are those who argue that much that is being touted as new is actually already known, whether from systems theory or from experience, and so complexity theory cannot be seen as adding value in that way. There are also concerns that the theory has not been worked out in sufficient detail, or with sufficient rigour, to make itself useful yet. Even that it encourages woolly thinking and imprecision. In terms of application in the field, it could be argued that it may lead to paralysis, in fear of all the unexpected things that could happen, and all the unintended consequences that could result, from a particular intervention. The proposed adaptability and sensitivity to emerging new situations may lead to difficulties in planning or, better expressed, must lead to a different conception of what constitutes planning, which is, in itself, challenging (or even threatening) for many fields. The criteria for funding projects or research may not fit comfortably with a complexity approach, and evaluation, already difficult especially in the field of conflict transformation, would require a re-conceptualisation. Pressure for results could act as a disincentive to change project design in the light of emergent processes. There may be the desire to maintain the illusion of control in order to retain the confidence of funders. On the other hand, there are fears that complexity may be used as an excuse for poor planning, and implementation, which is a valid concern for funders. In addition, there may be scepticism that the co-operation and co-ordination between different researchers or interveners, (let alone transdisciplinary undertakings) appropriate to working on complex problem domains, will not work due to differing mental models, competing interests and aims, competition for funding, prestige, etc. Such attempts appear, therefore, unrealistic or unfeasible.

**Neoliberalism is inevitable – markets control our thought**

**Hudson 99** [Mark, Progressive Librarian, Fall, “Understanding Information Media in the Age of Neoliberalism: The Contributions of Herbert Schiller”]

Neoliberal ideas are as old as capitalism itself, but in recent decades they have seen a tremendous resurgence and have displaced the state-interventionist economic theories of the interwar and post-World War II periods to become the reigning ideology of our time. Neoliberalism emerged full force in the 1980s with the right-wing Reagan and Thatcher regimes, but its **influence has** since **spread** across the political spectrum to encompass not only centrist political parties but even much of the traditional social-democratic left. In the 1990s, neoliberal hegemony over our politics and culture has become so overwhelming that it is becoming difficult to even rationally discuss what neoliberalism is; indeed, as Robert McChesney notes, the term "neoliberalism" is hardly known to the U.S. public outside of academia and the business community (McChesney). The corporate stranglehold on our information and communications media gives neoliberal ideologues a virtually **unchallenged platform** from which to blast their pro-market messages into every corner of our common culture. At the same time, neoliberalism provides the ideological cover for deregulatory legislation (most recently the 1996 Telecommunications Act) that enables corporations to extend their monopoly over these media even more. For the past three decades, one of the fiercest and most coherent critics of corporate control over the information/communications sphere has been the social scientist Herbert Schiller. Although Schiller began his career before neoliberalism's ascendance, and he does not even today use the term in his writings, his work provides essential insights into the roots of neoliberal/corporate hegemony over our information media and the adverse consequences of that hegemony for our politics, economy and culture.

#### Modern wind power is a method for humanity to control nature – leaving it as a standing reserve- turns case

Beckman 2k(Tad, Ph.D. HMC professor, “Heidegger and Environmental Ethics”, page 1 – 5, <http://www2.hmc.edu/~tbeckman/personal/HEIDART.HTML>)

Heidegger clearly saw the development of "energy resources" as symbolic of this evolutionary path; while the transformation into modern technology undoubtedly began early, the first definitive signs of its new character began with the harnessing of energy resources, as we would say. [(7)](http://www2.hmc.edu/%7Etbeckman/personal/HEIDART.HTML#N_7_) As a representative of the old technology, **the windmill took energy from the wind** but converted it immediately into other manifestations such as the grinding of grain; the windmill did not unlock energy from the wind in order to store it for later arbitrary distribution. Modern wind-generators, on the other hand, convert the energy of wind into electrical power which can be stored in batteries or otherwise. **The significance of storage is that** it places the energy at our disposal; and because of this storage the powers of nature can be turned back upon itself. The storing of energy is, in this sense, **the symbol of our** over-coming of nature **as a potent object**. "...a tract of land is challenged into the putting out of coal and ore. The earth now reveals itself as a coal mining district, the soil as a mineral deposit." {[7], p. 14} This and other examples that Heidegger used throughout this essay illustrate the difference between a technology that diverts the natural course cooperatively and **modern technology that achieves the unnatural by force**. Not only is this achieved by force but it is achieved by placing nature in our subjective context, setting aside natural processes entirely, and conceiving of all revealing as being relevant only to human subjective needs. The essence of technology originally was a revealing of life and nature in which human intervention deflected the natural course while still regarding nature as the teacher and, for that matter, the keeper. The essence of modern technology is a revealing of phenomena, often far removed from anything that resembles "life and nature," in which human intrusion not only diverts nature but fundamentally changes it. As a mode of revealing, technology today is a challenging-forth of nature so that the technologically altered nature of things is always a situation in which **nature and objects wait, standing in reserve** for our use. We pump crude oil from the ground and we ship it to refineries where it is fractionally distilled into volatile substances and we ship these to gas stations around the world where they reside in huge underground tanks, standing ready to power our automobiles or airplanes. Technology has intruded upon nature in a far more active mode that represents a consistent direction of domination. Everything is viewed as "standing-reserve" and, in that, loses its natural objective identity. The river, for instance, is not seen as a river; it is seen as a source of hydro-electric power, as a water supply, or as an avenue of navigation through which to contact inland markets. In the era of techne humans were relationally involved with other objects in the coming to presence; in the era of modern technology, humans challenge-forth the subjectively valued elements of the universe so that, within this new form of revealing, objects lose their significance to anything but their subjective status of standing-ready for human design. [(8)](http://www2.hmc.edu/%7Etbeckman/personal/HEIDART.HTML#N_8_) At this point, we have almost completed the analysis of modern technology in its essence.

#### Renewable integration impossible

Santoianni 12 -- combustion engineer who has worked on energy and environmental issues for 20 years, technical writing consultant @ Tau Technical Communications (Dawn, 5/17/12, "The Backbone of the Electric System: A Legacy of Coal and the Challenge of Renewables," http://news.yahoo.com/backbone-electric-system-legacy-coal-challenge-renewables-152900368.html)

Baseload generation currently provides the backbone for the electric grid. Baseload is the minimum level of electric demand over 24 hours, such as during late evening or early morning and is served by plants that provide steady and low-cost power with few unscheduled outages. Nuclear and coal have predominately served as baseload plants because they operate most efficiently at full, steady output and are slow to ramp up or down. Geothermal and hydropower have also been used in certain areas as baseload power. Hydropower with pumped storage is a flexible energy source able to serve sudden spikes in demand, such as during hot summer days (peak demand). Natural gas turbines, which can quickly ramp up or down to follow electric load, have been a preferred source of peaking power. Load-following or intermediate demand plants provide power in between off-peak and peak hours, which is when solar and wind power have had the most use. Intermittent or diurnal sources such as wind and solar have been widely considered unsuitable for baseload generation because of their variability. In other words, you can t count on them to meet demand 24×7. Energy storage may help bridge the gap for intermittent generating sources. Success with baseload solar power is promising, while other energy storage technologies are still under development. So why can t we just use wind and solar when available, supplement with current energy storage capabilities, and use quick-start resources such as natural gas turbines as needed? The problem lies with transmission constraints. While some studies have shown that load shifting using energy storage could help eliminate minimum generation constraints, these technologies have not reached wide-scale deployment and transmission infrastructure is lacking to fully support distributed renewable generation. Regional differences in available electric generating sources compound the problem. While some states such as California generate only a small percentage of power from coal, in other states including Kentucky and Indiana, over 85 percent of electricity generation is from coal. Hydropower sites are abundant in the Pacific Northwest, but relatively few installations exist in some areas of the U.S.. As a result, regional transmission system operators responsible for balancing load and maintaining electric reliability face a range of technical challenges. What works in the Northeast will not work in Texas. Each system has to find a way to incorporate renewable sources given the existing generating fleet, existing transmission infrastructure, and planned improvements. So we have an electric system based on large, centralized baseload plants that run (nearly) continuously and power that must be delivered in real-time by a transmission grid that needs modernization. To increase the complexity of this high-wire balancing act, increasing numbers of plug-in electric vehicles (EVs) are projected to hit the roadways. While electrification of transportation will help decrease reliance on fossil fuels, where will the power for those EVs come from? In some areas of the country, the answer right now is coal. Retiring older coal plants that operate off-peak can occur without impacting electric reliability, and is evidenced by the slate of recent retirement announcements. But replacing baseload coal generation with alternative power sources will be more difficult. Some people see repowering with natural gas as the solution, as carbon emissions from natural gas generation are 45 percent less than coal per megawatt-hour. Natural gas generation could serve as baseload generation, but opposition to hydraulic fracturing spurs concerns about future supply and potential price spikes. Permitting and constructing new nuclear plants is fraught with difficulties, partly due to opposition from environmental groups and ensuing cost overruns. Some envision smart grid technologies and transmission upgrades completely eliminating the reliance on baseload must-run generation, with an electric system powered mostly by renewable sources. Because renewable sources tend to be much smaller than coal-fired power plants, and located in areas that may not have sufficient transmission access, simply replacing coal for renewables is not straightforward. To reach 80 percent clean energy including combined cycle natural gas generation as clean would require the replacement of 35 percent of summer generating capacity (see Figure 2, coal + petroleum). The technological scale of such build out (over 370 gigawatts) is astounding. That would require about 185,000 2-megawatt wind turbines or over 700 large (500-megawatt) solar farms. Considering that even solar and wind projects have faced local opposition, this is a tall order.

#### Environmental apocalypticism causes eco-authoritarianism and mass violence against those deemed environmental threats and political apathy which turns case

Buell 3Frederick—cultural critic on the environmental crisis and a Professor of English at Queens College and the author of five books, *From Apocalypse To Way of Life,* pages 185-186

Looked at critically, then, crisis discourse thus suffers from a number of liabilities. First, it seems to have become a political liability almost as much as an asset. It calls up a fierce and effective opposition with its predictions; worse, its more specific predictions are all too vulnerable to refutation by events. It also exposes environmentalists to being called grim doomsters and antilife Puritan extremists. Further, concern with crisis has all too often tempted people to try to find a “total solution” to the problems involved— a phrase that, as an astute analyst of the limitations of crisis discourse, John Barry, puts it, is all too reminiscent of the Third Reich’s infamous “final solution.”55 A total crisis of society—environmental crisis at its gravest—threatens to translate despair into inhumanist authoritarianism; more often, however, it helps keep merely dysfunctional authority in place. It thus leads, Barry suggests, to the belief that only elite- and expert-led solutions are possible.56 At the same timeit depoliticizes people, inducing them to accept their impotence as individuals; this is something that has made many people today feel, ironically and/or passively, that since it makes no difference at all what any individual does on his or her own, one might as well go along with it. Yet another pitfall for the full and sustained elaboration of environmental crisis is, though least discussed, perhaps the most deeply ironic. A problem with deep cultural and psychological as well as social effects, it is embodied in a startlingly simple proposition: the worse one feels environmental crisis is, the more one is tempted to turn one’s back on the environment. This means, preeminently, turning one’s back on “nature”—on traditions of nature feeling, traditions of knowledge about nature (ones that range from organic farming techniques to the different departments of ecological science), and traditions of nature-based activism. If nature is thoroughly wrecked these days, people need to delink from nature and live in postnature—a conclusion that, as the next chapter shows, many in U.S. society drew at the end of the millenium. Explorations of how deeply “nature” has been wounded and how intensely vulnerable to and dependent on human actions it is can thus lead, ironically, to further indifference to nature-based environmental issues, not greater concern with them. But what quickly becomes evident to any reflective consideration of the difficulties of crisis discourse is that all of these liabilities are in fact bound tightly up with one specific notion of environmental crisis—with 1960s- and 1970s-style environmental apocalypticism. Excessive concern about them does not recognize that crisis discourse as a whole has significantly changed since the 1970s. They remain inducements to look away from serious reflection on environmental crisis only if one does not explore how environmental crisis has turned of late from apocalypse to dwelling place. The apocalyptic mode had a number of prominent features: it was preoccupied with running out and running into walls; with scarcity and with the imminent rupture of limits; with actions that promised and temporally predicted imminent total meltdown; and with (often, though not always) the need for immediate “total solution.” **Thus doomsterism was its reigning mode;** eco-authoritarianism was a grave temptation; and as crisis was elaborated to show more and more severe deformations of nature, temptation increased to refute it, or give up, or even cut off ties to clearly terminal “nature.”

#### No extinction from environmental collapse

Easterbrook 3 (Gregg, Senior Fellow – New Republic, “We’re All Gonna Die!”, Wired Magazine, July, http://www.wired.com/wired/archive/11.07/doomsday.html?pg=1&topic=&topic\_set=)

If we're talking about doomsday - the end of human civilization - many scenarios simply don't measure up. A single nuclear bomb ignited by terrorists, for example, would be awful beyond words, but life would go on. People and machines might converge in ways that you and I would find ghastly, but from the standpoint of the future, they would probably represent an adaptation. Environmental collapse might make parts of the globe unpleasant, but considering that the biosphere has survived ice ages, it **wouldn't be the final curtain**. Depression, which has become 10 times more prevalent in Western nations in the postwar era, might grow so widespread that vast numbers of people would refuse to get out of bed, a possibility that Petranek suggested in a doomsday talk at the Technology Entertainment Design conference in 2002. But Marcel Proust, as miserable as he was, wrote Remembrance of Things Past while lying in bed.

#### No brink to environmental collapse

Lomborg 12 -- director of the Copenhagen Consensus Center and author of Smart Solutions to Climate Change (Bjorn, July/August, "Environmental Alarmism, Then and Now," http://www.foreignaffairs.com/articles/137681/bjorn-lomborg/environmental-alarmism-then-and-now?page=show)

As for its pollution predictions, The Limits to Growth was simultaneously scary and vague. Pollution's increase was supposed to trigger a global collapse if the decrease of food or resources didn't do so first, but how exactly pollution was defined was left unclear. Individual pollutants, such as DDT, lead, mercury, and pesticides, were mentioned, but how those could kill any significant number of people was unspecified, making it a bit tricky to test the prediction. Air pollution might be considered a good proxy for overall pollution, since it was the biggest environmental killer in the twentieth century and since the Environmental Protection Agency estimates that its regulation produces 86-96 percent of all the social benefits from environmental regulation more generally. In the developing world, outdoor air pollution is indeed rising and killing more people, currently perhaps over 650,000 per year. Indoor air pollution (from using dirty fuels for cooking and heating) kills even more, almost two million per year (although that number has been decreasing slightly).

#### Wind will always require backup fuel sources

Driessen 12 (MAKE THIS CITE MATCH, 8 May 2012, Big Wind Subsidies: Time to Terminate?, <http://www.masterresource.org/2012/05/wind-subsidies-terminate/#more-19930>)

Energy 101. It is impossible to have wind turbines without fossil fuels, especially natural gas. Turbines average only 30% of their “rated capacity” – and less than 5% on the hottest and coldest days, when electricity is needed most. They produce excessive electricity when it is least needed, and electricity cannot be stored for later use. Hydrocarbon-fired backup generators must run constantly, to fill the gap and avoid brownouts, blackouts, and grid destabilization due to constant surges and falloffs in electricity to the grid. Wind turbines frequently draw electricity from the grid, to keep blades turning when the wind is not blowing, reduce strain on turbine gears, and prevent icing during periods of winter calm.¶ Energy 201.Despite tens of billions in subsidies, wind turbines still generate less than 3% of US electricity. Thankfully, conventional sources keep our country running – and America still has centuries of hydrocarbon resources. It’s time our government allowed us to develop and use those resources.

#### Financial Incentives for wind create artificial investment – a natural wind industry is impossible

WTF 11 -- Citizens' Task Force on Wind Power, coalition of citizens from around the state drawn together in the common purpose of advocating for responsible, science based, economically and environmentally sound approaches to Maine’s energy policy ("Unsustainable Subsidies," http://www.windtaskforce.org/page/unsustainable-subsidies)

Grid-scale wind is an industry that would not exist without our government reaching into our pockets and separating us from the money we've earned. It's an industry that lectures us about sustainability which is built on unsustainable subsidies. Whereas an event like the California gold rush was set in motion by the discovery of a resource, the "wind rush" we are seeing in Maine was set in motion by lobbyists successfully lobbying our federal government to hand out money for wind like Halloween candy. The heightened intensity of this wind rush which we observe today is likely attributable to the fact that the subsidies may run out. In fact, the main federal incentive for the wind industry, the 2.2 cents per kilowatt hour Production Tax Credit, is set to expire on December 31, 2012. The pending expiration of this favorite freebie has the Maine wind companies in a full parasitic mode, along with their coterie of related parasitic companies that also feed off of this gusher of money, that belongs to us. As in many "hurry up offenses", they are making plenty of mistakes and showing signs of desperation. And while the wind industry would like you to believe that it needs government support to get it to the day it can stand on its own, no changes in technology will ever be able to bring efficacy to wind as it lacks energy density. Stand in a river current producing hydroelectricity and you may drown. Get too close to natural gas combustion producing electricity and you may burn yourself. Stand in the wind quarry of the Maine wind industry and you will likely comment, "that little bit of breeze feels nice". Here's a common sense test. Simply observe how many days in Maine are windy over the course of the year. Wind is far from a developing resource that will one day work for us. Rather it is an old failed energy source that modern society abandoned long ago. The true quarry of the Maine wind industry is not wind at all but rather that hard earned money in our wallets. They want to extract all they can via their government programs and they care not that they also will drive our already oppressive electricity rates through the roof. The coterie of parasites, less than 1% of Maine companies, knows full well they are damaging us financially yet as shameless panderers have no problem at all trying to pass themselves off as an economic panacea as they broadcast their message of JOBS - never telling you they are virtually all temporary and often filled with out of state workers. As others have said, nothing short of a change in the laws of physics will make wind in Maine viable. Every single one of the wind projects set up in the USA is created using a single purpose legal/corporate structure that removes all individual legal and financial liability of the developer/owner/investor/lender to the project. If a project fails for any reason the principles just walk away and the local community and/or state are stuck with the project as is. DOE loan guarantees mean a commercial lender will put up the cash loan for the balance of project cost with the full faith and credit of the US government to pay off the loan if there is a default (a/k/a the Solyndra deal). Most wind deals have been funded using a 50%/50% investor and lender ratio. However, it appears that Record Hill may be close to the maximum 80% debt (too bad for the taxpayers). Commercial lenders have strict credit criteria and are not inclined generally to lend to projects where there are too many unknown risks and little if no collateral value (i.e. if a wind project fails due to mechanical operating failure, low energy generation and/or low prices what value does a project have?) Investors have little or no project risks because they derive 100% of their return on investment from the tax benefits. As long as a project is "available" to produce power (IRS definition) the investor can claim the tax shelter on its tax return. A project does not have to produce power for the investor to claim the tax deductions. After the first 6 years the investor doesn't care if a project fails because they had their full investment and profit returned. That is why you see many of these projects with partnership agreements between the developer and the investor whereby the developer has the option to buy out the investor at a bargain price the end of year ten if the project remains viable.

#### Intermittency kills solvency

The Washington Times 8/9/12 (George Steeg, <http://p.washingtontimes.com/news/2012/aug/9/wind-turbine-hot-air/>, Letter to the Editor: Wind Turbine Hot Air)

Paul Driessen presents a grisly picture of the slaughter of eagles, whooping cranes and other “majestic sovereigns of the sky,” large and small (“Wind-energy tax credits fund bird murder,” Commentary, Tuesday). What Mr. Driessen omits is perspective on the paltry amount of electricity generated by what he aptly calls “bird Cuisinarts.” Total electricity from the existing and planned wind turbines in the six whooping crane flyway states will amount to only one-quarter of the output of one nuclear plant. Even worse, wind farms provide electricity at full-power output for only an average of eight hours a day, and output can drop to zero without warning. Full nuclear-power output, and the electricity from smaller coal- and gas-fired alternatives, is available 24 hours every day and never drops to zero. Since an intermittent megawatt generated by wind is no substitute for a dependable megawatt generated by coal, gas or nuclear power, and each wind megawatt must be backed up by a coal, gas or nuclear megawatt, why can’t we just stop with the wind turbines and save the birds?

#### Their analysis of neoliberalism is reductive –it negates possibilities for political transformation.

**Barnett 5** (Clive, Faculty of Social Sciences, The Open University, Geoforum 36, “The consolations of ‘neoliberalism,’” p. 9-10, Ebsco)

The blind-spot in theories of neoliberalism—whether neo-Marxist and Foucauldian—comes with trying to account for how top-down initiatives ‘take’ in everyday situations. So perhaps the best thing to do is to stop thinking of “neoliberalism” as a coherent “hegemonic” project altogether. For all its apparent critical force, the vocabulary of “neoliberalism” and “neoliberalization” in fact provides a double consolation for leftist academics: it supplies us with plentiful opportunities for unveiling the real workings of hegemonic ideologies in a characteristic gesture of revelation; and in so doing, it invites us to align our own professional roles with the activities of various actors “out there”, who are always framed as engaging in resistance or contestation. The conceptualization of “neoliberalism” as a “hegemonic” project does not need refining by adding a splash of Foucault. Perhaps we should try to **do without the concept of “neoliberalism” altogether**, because it might actually compound rather than aid in the task of figuring out how the world works and how it changes. One reason for this is that, between an overly economistic derivation of political economy and an overly statist rendition of governmentality, stories about “neoliberalism” manage to **reduce** the understanding of social relations to a residual effect of hegemonic projects and/or governmental programmes of rule (see Clarke, 2004a). Stories about “neoliberalism” pay little attention to the pro-active role of socio-cultural processes in provoking changes in modes of governance, policy, and regulation. Consider the example of the restructuring of public services such as health care, education, and criminal justice in the UK over the last two or three decades. This can easily be thought of in terms of a ‘‘hegemonic’’ project of “neoliberalization”, and certainly one dimension of this process has been a form of anti-statism that has rhetorically contrasted market provision against the rigidities of the state. But in fact these ongoing changes in the terms of public-policy debate involve a combination of different factors that add up to a much more dispersed populist reorientation in policy, politics, and culture. These factors include changing consumer expectations, involving shifts in expectations towards public entitlements which follow from the generalization of consumerism; the decline of deference, involving shifts in conventions and hierarchies of taste, trust, access, and expertise; and the refusals of the subordinated, refer- ring to the emergence of anti-paternalist attitudes found in, for example, women’s health movements or anti-psychiatry movements. They include also the development of the politics of difference, involving the emergence of discourses of institutional discrimination based on gender, sexuality, race, and disability. This has disrupted the ways in which welfare agencies think about inequality, helping to generate the emergence of contested inequalities, in which policies aimed at addressing inequalities of class and income develop an ever more expansive dynamic of expectation that public services should address other kinds of inequality as well (see Clarke, 2004b). None of these populist tendencies is simply an expression of a singular “hegemonic” project of “neoliberalization”. They are effects of much longer rhythms of socio-cultural change that emanate from the bottom-up. It seems just as plausible to suppose that what we have come to recognise as “hegemonic neoliberalism” is a **muddled** set of **ad hoc, opportunistic accommodations** to these unstable dynamics of social change as it is to think of it as the outcome of highly coherent political-ideological projects. Processes of privatization, market liberalization, and de-regulation have often followed an ironic pattern in so far as they have been triggered by citizens’ movements arguing from the left of the political spectrum against the rigidities of statist forms of social policy and welfare provision in the name of greater autonomy, equality, and participation (e.g. Horwitz, 1989). The political re-alignments of the last three or four decades **cannot** therefore **be adequately understood** in terms of a straightforward shift from the left to the right, from values of collectivism to values of individualism, or as a re-imposition of class power. The emergence and generalization of this populist ethos has much longer, deeper, and wider roots than those ascribed to “hegemonic neoliberalism”. And it also points towards the extent to which easily the most widely resonant political rationality in the world today is not right-wing market liberalism at all, but is, rather, the polyvalent discourse of ‘‘democracy’’ (see Barnett and Low, 2004).

#### Evaluate consequences – allowing violence for the sake of moral purity is evil

Isaac 2 (Jeffrey C., Professor of Political Science – Indiana-Bloomington, Director – Center for the Study of Democracy and Public Life, Ph.D. – Yale, Dissent Magazine, 49(2), “Ends, Means, and Politics”, Spring, Proquest)

As writers such as Niccolo Machiavelli, Max Weber, Reinhold Niebuhr, and Hannah Arendt have taught, an unyielding concern with moral goodness undercuts political responsibility. The concern may be morally laudable, reflecting a kind of personal integrity, but it suffers from three fatal flaws: (1) It fails to see that the purity of one’s intention does not ensure the achievement of what one intends. Abjuring violence or refusing to make common cause with morally compromised parties may seem like the right thing; but if such tactics entail impotence, then it is hard to view them as serving any moral good beyond the **clean conscience** of their supporters; (2) it fails to see that in a world of real violence and injustice, moral purity is not simply a form of powerlessness; it is often a form of complicity in injustice. This § Marked 11:23 § is why, from the standpoint of politics--as opposed to religion--pacifism is always a potentially immoral stand. In categorically repudiating violence, it refuses in principle to oppose certain violent injustices with any effect; and (3) it fails to see that politics is as much about **unintended consequences** as it is about intentions; it is the effects of action, rather than the motives of action, that is most significant. Just as the alignment with “good” may engender impotence, it is often the pursuit of “good” that generates evil. This is the lesson of communism in the twentieth century: it is not enough that one’s goals be sincere or idealistic; it is equally important, always, to ask about the effects of pursuing these goals and to judge these effects in pragmatic and historically contextualized ways. Moral absolutism inhibits this judgment. It alienates those who are not true believers. It promotes arrogance. And it undermines political effectiveness.

#### Life has intrinsic value that is unattached to instrumental capacity

Penner 5 (Melinda, Director of Operations – STR, “End of Life Ethics: A Primer”, Stand to Reason, http://www.str.org/site/News2?page=NewsArticle&id=5223)

Intrinsic value is very different. Things with intrinsic value are valued for their own sake. They don’t have to achieve any other goal to be valuable. They are goods in themselves. Beauty, pleasure, and virtue are likely examples. Family and friendship are examples. Something that’s intrinsically valuable might also be instrumentally valuable, but **even if it loses its instrumental value**, its intrinsic value remains. Intrinsic value is what people mean when they use the phrase "the sanctity of life." Now when someone argues that someone doesn’t have "quality of life" they are arguing that life is only valuable as long as it obtains something else with quality, and when it can’t accomplish this, it’s not worth anything anymore. It's only instrumentally valuable. The problem with this view is that it is entirely subjective and changeable with regards to what might give value to life. Value becomes a completely personal matter, and, as we all know, our personal interests change over time. There is no grounding for objective human value and human rights if it’s not intrinsic value. Our legal system is built on the notion that humans have intrinsic value. The Declaration of Independence: "We hold these truths to be self-evident, that all men are created equal, that each person is endowed by his Creator with certain unalienable rights...." If human beings only have instrumental value, then slavery can be justified because there is nothing objectively valuable that requires our respect. There is nothing other than intrinsic value that can ground the unalienable equal rights we recognize because there is nothing about all human beings that is universal and equal. Intrinsic human value is what binds our social contract of rights. So if human life is intrinsically valuable, then it remains valuable even when our capacities are limited. Human life is valuable even with tremendous limitations. Human life remains valuable because its value is not derived from being able to talk, or walk, or feed yourself, or even reason at a certain level. Human beings don’t have value only in virtue of states of being (e.g., happiness) they can experience.

#### Individual greed makes the impact inevitable

Richard Aberdeen, Owner of Freedom Tracks, 03

[“THE WAY A Theory of Root Cause and Solution,” http://freedomtracks.com/uncommonsense/theway.html]

A view shared by many modern activists is that capitalism, free enterprise, multi-national corporations and globalization are the primary cause of the current global Human Rights problem and that by striving to change or eliminate these, the root problem of what ills the modern world is being addressed. This is a rather unfortunate and historically myopic view, reminiscent of early “class struggle” Marxists who soon resorted to violence as a means to achieve rather questionable ends. And like these often brutal early Marxists, modern anarchists who resort to violence to solve the problem are walking upside down and backwards, adding to rather than correcting, both the immediate and long-term Human Rights problem. Violent revolution, including our own American revolution, becomes a breeding ground for poverty, disease, starvation and often mass oppression leading to future violence. Large, publicly traded corporations are created by individuals or groups of individuals, operated by individuals and made up of individual and/or group investors. These business enterprises are deliberately structured to be empowered by individual (or group) investor greed. For example, a theorized ‘need’ for offering salaries much higher than is necessary to secure competent leadership (often resulting in corrupt and entirely incompetent leadership), lowering wages more than is fair and equitable and scaling back of often hard fought for benefits, is sold to stockholders as being in the best interest of the bottom-line market value and thus, in the best economic interests of individual investors. Likewise, major political and corporate exploitation of third-world nations is rooted in the individual and joint greed of corporate investors and others who stand to profit from such exploitation. More than just investor greed, corporations are driven by the greed of all those involved, including individuals outside the enterprise itself who profit indirectly from it. If one examines “the course of human events” closely, it can correctly be surmised that the “root” cause of humanity’s problems comes from individual human greed and similar negative individual motivation. The Marx/Engles view of history being a “class” struggle ¹ does not address the root problem and is thus fundamentally flawed from a true historical perspective (see Gallo Brothers for more details). So-called “classes” of people, unions, corporations and political groups are made up of individuals who support the particular group or organizational position based on their own individual needs, greed and desires and thus, an apparent “class struggle” in reality, is an extension of individual motivation. Likewise, nations engage in wars of aggression, not because capitalism or classes of society are at root cause, but because individual members of a society are individually convinced that it is in their own economic survival best interest. War, poverty, starvation and lack of Human and Civil Rights have existed on our planet since long before the rise of modern capitalism, free enterprise and multi-national corporation avarice, thus the root problem obviously goes deeper than this. Junior Bush and the neo-conservative genocidal maniacs of modern-day America could not have recently effectively gone to war against Iraq without the individual support of individual troops and a certain percentage of individual citizens within the U.S. population, each lending support for their own personal motives, whatever they individually may have been. While it is true that corrupt leaders often provoke war, using all manner of religious, social and political means to justify, often as not, entirely ludicrous ends, very rare indeed is a battle only engaged in by these same unscrupulous miscreants of power. And though a few iniquitous elitist powerbrokers may initiate nefarious policies of global genocidal oppression, it takes a very great many individuals operating from individual personal motivations of survival, desire and greed to develop these policies into a multi-national exploitive reality. No economic or political organization and no political or social cause exists unto itself but rather, individual members power a collective agenda. A workers’ strike has no hope of succeeding if individual workers do not perceive a personal benefit. And similarly, a corporation will not exploit workers if doing so is not believed to be in the economic best interest of those who run the corporation and who in turn, must answer (at least theoretically) to individuals who collectively through purchase or other allotment of shares, own the corporation. Companies have often been known to appear benevolent, offering both higher wages and improved benefits, if doing so is perceived to be in the overall economic best interest of the immediate company and/or larger corporate entity. Non-unionized business enterprises frequently offer ‘carrots’ of appeasement to workers in order to discourage them from organizing and historically in the United States, concessions such as the forty-hour workweek, minimum wage, workers compensation and proscribed holidays have been grudgingly capitulated to by greedy capitalist masters as necessary concessions to avoid profit-crippling strikes and outright revolution.

#### Representations don’t influence reality

Kocher 00 (Robert L., Author of “The American Mind in Denial” and Philosopher, “Discourse on Reality and Sanity”, http://freedom.orlingrabbe.com/lfetimes/reality\_sanity1.htm)

While it is not possible to establish many proofs in the verbal world, and it is simultaneously possible to make many uninhibited assertions or word equations in the verbal world, it should be considered that reality is more rigid and does not abide by the artificial flexibility and latitude of the verbal world. The world of words and the world of human experience are very imperfectly correlated. That is, saying something doesn't make it true. A verbal statement in the world of words doesn't mean it will occur as such in the world of consistent human experience I call reality. In the event verbal statements or assertions disagree with consistent human experience, what proof is there that the concoctions created in the world of words should take precedence or be assumed a greater truth than the world of human physical experience that I define as reality? In the event following a verbal assertion in the verbal world produces pain or catastrophe in the world of human physical reality or experience, which of the two can and should be changed? Is it wiser to live with the pain and catastrophe, or to change the arbitrary collection of words whose direction produced that pain and catastrophe? Which do you want to live with? What proven reason is there to assume that when doubtfulness that can be constructed in verbal equations conflicts with human physical experience, human physical experience should be considered doubtful? It becomes a matter of choice and pride in intellectual argument. My personal advice is that when verbal contortions lead to chronic confusion and difficulty, better you should stop the verbal contortions rather than continuing to expect the difficulty to change. Again, it's a matter of choice. Does the outcome of the philosophical question of whether reality or proof exists decide whether we should plant crops or wear clothes in cold weather to protect us from freezing? Har! Are you crazy? How many committed deconstructionist philosophers walk about naked in subzero temperatures or don't eat? Try creating and living in an alternative subjective reality where food is not needed and where you can sit naked on icebergs, and find out what happens. I emphatically encourage people to try it with the stipulation that they don't do it around me, that they don't force me to do it with them, or that they don't come to me complaining about the consequences and demanding to conscript me into paying for the cost of treating frostbite or other consequences. (sounds like there is a parallel to irresponsibility and socialism somewhere in here, doesn't it?). I encourage people to live subjective reality. I also ask them to go off far away from me to try it, where I won't be bothered by them or the consequences. For those who haven't guessed, this encouragement is a clever attempt to bait them into going off to some distant place where they will kill themselves off through the process of social Darwinism — because, let's face it, a society of deconstructionists and counterculturalists filled with people debating what, if any, reality exists would have the productive functionality of a field of diseased rutabagas and would never survive the first frost. The attempt to convince people to create and move to such a society never works, however, because they are not as committed or sincere as they claim to be. Consequently, they stay here to work for left wing causes and promote left wing political candidates where there are people who live productive reality who can be fed upon while they continue their arguments. They ain't going to practice what they profess, and they are smart enough not to leave the availability of people to victimize and steal from while they profess what they pretend to believe in.

## 2NC – Solar CP, Case

### **2NC Solar Solvency**

#### Solar CP sufficient to solve – to access their citizen engagement args, we just need to set up a renewable source of energy outside corporate control – no reason wind is specifically key

#### Even if wind is currently dictated through corporate control and the CP doesn't resolve that, it still gives citizens a sufficient means to access renewables – view solvency through the lens of sufficiency because no one can solve every instance of neoliberal instance, it's just about creating a successful challenge to the state

#### At worst it's a solvency deficit to the aff – if we can't solve neither can they – they don't do anything about corporatization of nuclear, solar, natural has, etc

#### 1AC CX – about electricity generation, people producing their own industry – we solve that

#### Solar causes a consumptive shift

Pierce 10 [James Pierce, Eric Paulos, researcher and Cooper-Siegel Endowed Chair at the Human-Computer Interaction Institute, Carnegie Mellon University “Materializing energy”, <http://www.paulos.net/papers/2010/MaterializingEnergy_DIS2010.pdf>]

Designing for energy as material and symbolicProposing a more explicit treatment of the design of energy as both material and symbolic is certainly not without problems. On a very pragmatic note, the fact that energy is “consumed”—its materiality-at-hand degrading and eventually dissolving entirely—may suggest longevity and endurance as inappropriate notions to apply to the design of everyday interactions with energy. How and why should the symbolic value of energy endure if its materiality does not? In terms of sustainably re-designing our ßeveryday interactions with energy and energy consuming products, the notion of care of energy may be more appropriate than that of attachment to energy. We might design for caring for our energy in the same ways that one cares for the materiality of food when gardening or preparing an elaborate meal. As a more concrete example, it may be worthwhile to design microgeneration technologies in ways that promote a form of emotional attachment to or care for energy. Indeed evidence from interviews with residents using domestic microgeneration technologies points toward forms of attachment to energy based on the introduction of these technologies, even among those that did not commission their installation. For example: “The advantage with [solar power technologies installed in his home] is that it makes you think about your energy use more. You value it more…” and “I want to feel that as much electricity as I can use is my own electricity.” [7, p. 51-53]. Perhaps **more problematic is that** designing energy to more explicitly enter into the symbolic realm of consumption may lead to the increased material consumption of energy by way of its being increasingly sought after as an unsustainable object of desire.**6** Criticism of such a “reification of energy” must be taken seriously, yet we must also acknowledge that all material and immaterial technologies are already symbolically consumed, including energy technologies such as solar panels. The material symbolic value of energy and energy technologies can be considered or ignored by designers as well as manipulated in ways working for or against goals of sustainability. Whatever the case, the symbolic value of energy and energy technologies is always to some extent present. As such, we argue it is imperative that designers aim to sustainably redefine (or “recode” [12]) our understandings of and interactions with energy through careful attention to the material-symbolic value of emerging as well as commonplace energy related technologies and the energy they materialize. The Energy Memento may be viewed as a way of materializing the concept of the material-symbolic value of energy. Bequeathing an heirloom Energy Memento, for example, seems quite unlikely to ever become a common practice but nonetheless serves as useful counterpoint to the current undifferentiatedness of energy and offers an alternative to our currently unsustainable situation in which energy is merely “something to”— something undemanding and undeserving of our sustained care and attention.

#### Solar would substantially reduce emissions- low cost key

International Energy Agency, 12 (7-9,"Solar energy could meet one-sixth of global demand for heating and cooling in under 40 years" http://www.iea.org/newsroomandevents/news/2012/july/name,28298,en.html)

Solar energy could account for around one-sixth of the world’s total low-temperature heating and cooling needs by 2050, according to a roadmap launched today by the International Energy Agency (IEA). This would eliminate some 800 megatonnes of carbon dioxide (CO2) emissions per year, or more than Germany’s total CO2 emissions in 2009. The IEA’s Solar Heating and Cooling Roadmap outlines how best to advance the global uptake of solar heating and cooling (SHC) technologies, which produce very low levels of greenhouse-gas emissions. Some SHC technologies, such as domestic hot water heaters, are already widely in use in certain countries, but others are just entering the development phase. While solar heating and cooling today makes a modest contribution to world energy demand, the roadmap envisages that if governments and industry took concerted action, solar energy could annually produce more than 16% of total final energy use for low-temperature heat and nearly 17% for cooling. This would correspond to a 25-fold increase in absolute terms of SHC technology deployment in the next four decades. “Given that global energy demand for heat represents almost half of the world’s final energy use – more than the combined global demand for electricity and transport – solar heat can make a significant contribution in both tackling climate change and strengthening energy security,” said Paolo Frankl, Head of the IEA’s Renewable Energy Division. Benefiting warm climate countries In addition to replacing fossil fuels that are directly burned to produce heat, solar heating technologies can also replace electricity used for heating water as well as individual rooms and buildings. This would be especially welcome in warm climate countries without gas infrastructure and lacking alternative heating fuels. South Africa is cited as an example of a country that would benefit, as electric water heating currently accounts for a third of average household (coal-based) power consumption there. On top of this, the report notes that solar thermal cooling technology – in which the sun’s heat can be used to cool air – can reduce the burden on electric grids at times of peak cooling demand by fully or partially replacing conventional electrically powered air conditioners in buildings.

#### Solar’s competitive

Smith, 9/17/12 – assistant professor of finance at Stony Brook University (Noah, “The End of Global Warming: How to Save the Earth in 2 Easy Steps.” http://www.theatlantic.com/business/archive/2012/09/the-end-of-global-warming-how-to-save-the-earth-in-2-easy-steps/262418/)

You may not believe me, but I have news about global warming: Good news, and better news. Here is the good news. US carbon emissions are decreasing rapidly. We're down over 10% from our emissions peak in 2007. Furthermore, the drop isn't just a function of the Great Recession. Since 2010 our economy has been growing, but emissions have kept on falling. The reason? Natural gas. With the advent of "fracking" technology, the price of gas has plummeted far below that of coal, and as a result, essentially no new coal plants are being built. Although gas does release carbon, it only releases about half as much as coal for the same amount of electricity. This is why -- despite our failure to join the Kyoto Protocol or impose legal restrictions on CO2 -- the United States is now outpacing the rest of the developed world in reducing our contribution to global warming. Now for the better news. A technology is in the pipeline that has the potential to eliminate CO2 emissions entirely. Solar power, long believed to be unworkably expensive, has actually been falling in cost at a steady exponential rate of 7 percent per year for the last three decades straight. Because of this "Moore's Law for solar", electricity from solar panels now costs less than twice as much as electricity from coal, and only about three times as much as electricity from gas. Furthermore, technologies now in the pipeline seem to ensure that the cost drop will continue. Within the decade, solar could be cheaper than coal. Within two decades, cheaper than gas. When that happens, assuming we also have electric cars, it is game over for carbon emissions.

**Solar PV will out-compete other renewables**

**Desmond 12** (James Christopher, Attorney at Law in Savannah, GA, J.D. at State University of New York at Buffalo - Law School, “Solar Economics & Politics In Real Time,” *Free Market Solar Power*, 8-22-12, <https://sites.google.com/site/freemarketsolarpower/home>)

More importantly, it's do-able. I project that by no later than 2015 (hence, reasonably soon), unsubsidized $1/watt ("grid parity," as also explained here and here) will be achieved (more on this below), and $1/watt will mean, to anyone, "I must have this for my home and farm now." That "anyone" will be "Joe Six Pack" (hereafter, "Joe," representing the average middle class American), who will drive to his local Home Depot, go down its "Solar Aisle," load up some PV panels into his pick-up truck and, by the end of two weekends (using plug-and-play simple, all-in-one style connections) provide all the power his family will ever use, if not also reap some "reverse-meter" electricity credits on his power bill by selling his excess power to his utility. Most importantly, he'll do it because it makes economic sense for him to do it -- he'll make and save money, and hey, if there's an environmental benefit well that will just be icing on his cake. And he won't do it because his government's bribing him to do it with taxpayer money. He'll do it because the free market and his own ingenuity (and that flowing from the crowd-sourced wisdom flowing from DIY sites) will enable him to produce his own (at a minimum, for self-consumption) **electricity as cheap** if not cheaper than **brown-power** energy. He'll also pick Solar PV over Solar Thermal, Concentrated Solar Thermal, Concentrated PV (CPV - see also this), Concentrated PV/Thermal, and **other alternative energy** technologies like wind, which has great market potential, and could even reach "grid parity," but only off Georiga's coast because its mainland is not in a good zone, though that's debatable, even as a global benefit, but see this. Why will Joe pick **Solar PV**? Because it will be **cheap**, makes sense in Georgia's insolation zone, has a one-time-installation cost, can be added to incrementally as he finds more money for it, and will be easy to install and maintain. It has no "negative externalities" while operating, and will be warranted at 90% output for 10 years, and 80% for the next 20 (solar panels degrade at about .25% to 1% a year). Part of a "solar power market [that] grew a record 67% last year, [thus] making it the fastest-growing energy sector," and may skyrocket if Saudi Arabia becomes "the Saudi Arabia of Solar Electricity" and produces 25% of the planet's electricity. Nor will it ever pose a catastrophic risk to entire national economies and environments. Nor will the self-consumed part of the power be subject to as much as 20% in transmission/distribution losses.

### 2NC Overview

#### Wind is key to the Chinese renewable leadership – outweighs and solves multiple scenarios for extinction

#### China tech development is k2 actualize tech developments which make renewables more competitive

#### China’s economic rise is good --- they’re on the brink of collapse --- causes CCP instability and lashout --- also tubes the global economy, US primacy, and Sino relations

Mead 9 Walter Russell Mead, Henry A. Kissinger Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations, “Only Makes You Stronger,” The New Republic, 2/4/9, http://www.tnr.com/story\_print.html?id=571cbbb9-2887-4d81-8542-92e83915f5f8

The greatest danger both to U.S.-China relations and to American power itself is probably not that China will rise too far, too fast; it is that the current crisis might end China's growth miracle. In the worst-case scenario, the turmoil in the international economy will plunge China into a major economic downturn. The Chinese financial system will implode as loans to both state and private enterprises go bad. Millions or even tens of millions of Chinese will be unemployed in a country without an effective social safety net. The collapse of asset bubbles in the stock and property markets will wipe out the savings of a generation of the Chinese middle class. The political consequences could include dangerous unrest--and a bitter climate of anti-foreign feeling that blames others for China's woes. (Think of Weimar Germany, when both Nazi and communist politicians blamed the West for Germany's economic travails.) Worse, instability could lead to a vicious cycle, as nervous investors moved their money out of the country, further slowing growth and, in turn, fomenting ever-greater bitterness. Thanks to a generation of rapid economic growth, China has so far been able to manage the stresses and conflicts of modernization and change; nobody knows what will happen if the growth stops.

#### Chinese lashout goes nuclear

The Epoch Times, Renxing San, 8/4/2004, 8/4, http://english.epochtimes.com/news/5-8-4/30931.html

Since the Party’s life is “above all else,” it would not be surprising if the CCP resorts to the use of biological, chemical, and nuclear weapons in its attempt to extend its life. The CCP, which disregards human life, would not hesitate to kill two hundred million Americans, along with seven or eight hundred million Chinese, to achieve its ends. These speeches let the public see the CCP for what it really is. With evil filling its every cell the CCP intends to wage a war against humankind in its desperate attempt to cling to life. That is the main theme of the speeches. This theme is murderous and utterly evil. In China we have seen beggars who coerced people to give them money by threatening to stab themselves with knives or pierce their throats with long nails. But we have never, until now, seen such a gangster who would use biological, chemical, and nuclear weapons to threaten the world, that all will die together with him. This bloody confession has confirmed the CCP’s nature: that of a monstrous murderer who has killed 80 million Chinese people and who now plans to hold one billion people hostage and gamble with their lives.

#### Turns the environment

Ethan Goffman 11, Associate Editor of the journal Sustainability: Science, Practice, & Policy, May 2011, “China’s Surge in Renewable Energy,” <http://www.csa.com/discoveryguides/renewable/review.pdf>

Global pressure to reduce greenhouse gas emissions is part of the reason for China’s turn to renewables. Officially, China has long denied responsibility, claiming, along with many developing countries, that since it “came late to the industrialization game, the core economies, with their significantly greater historical greenhouse gas contributions, must pay for a global transformation away from fossil fuels” (Economy). Even today, as the largest greenhouse gas emitter, China “adamantly refuses to commit to any binding, international carbon emissions reduction targets” (Ma), arguing that it is in many ways still a poor country, and not historically responsible for the climate crisis. There is some substance to this argument, as each Chinese is responsible for only 1/5 the emissions of the average American (Ma) (the U.S. currently has 313 million people while China has over 1.3 billion, according to the CIA World Fact Book). Yet China is now the world’s largest emitter of greenhouse gases, and future projections are that the situation will only get worse. Despite clean energy efforts, China is expected to “nearly double its coal-fired power capacity from 350 gigawatts (GW) in 2006 to 950 GW in 2030 and . . . will account for 74 percent of the total increase in the world's coal-related carbon dioxide emissions during that period” (Ma). Clearly, such an increase would put tremendous stress on the world’s ecosystems.

### U – Leading Wind Now

#### China’s leading the globe in clean tech competitiveness---wind’s key---and it’s key to offset their reliance on coal---turns the case because Chinese leadership drives U.S.-China energy cooperation

Yu 12-28 Hongyuan, professor and deputy director of the Institute for Comparative Politics and Public Policy, Shanghai Institutes for International Studies, 12/28/12, “A revolution is here, and clean energy is the spark,” http://europe.chinadaily.com.cn/epaper/2012-12/28/content\_16065380.htm

Technological innovation is critical in the energy structure and, furthermore, next-generation energy will determine not only the future of the international economic system but shifts in political power. Since the modern international system was set up, the energy chain has undergone two important changes. The first was during the Industrial Revolution in the 1860s, ushered in by Britain, which was marked by a transition from the era of fuel-wood, or the bio-fuel era, to the era of coal. The second change was the second industrial revolution, in the United States in the 1920s, which saw a transition from the era of coal to the era of oil. Today we are in the midst of a third revolution, a transition to an era of clean and low-carbon energy. Under the long-cycle theory, the ownership and use of new energy is closely related to national technological and institutional advances. Countries with a dominant position in new energy must have an institutional and technical advantage stemming from their possession and use of new energy. They have to break through constraints imposed by previous economic structures, which leads to big changes in the global industrial chain, allocation of resources and national competitiveness. There is every reason to believe that those new-energy powerhouses will ultimately change the global distribution of power through international competition. As history shows, every significant structural change in the international system has been due to a revolution in energy. The country or non-state entity that seized a new energy chain or part of it was challenging the status quo. As the world debates collective action against climate change, most countries have found that economies based on new and clean energy and on low-carbon and clean energy hold the keys to the future. The European Union's carbon aviation tax aimed at boosting the bloc's competitiveness and promoting climate negotiations could also boost its creativity and competitive edge. The Low Carbon Economy Report by the Royal Institute of International Affairs says that the EU promoted climate negotiations not just because it was a pioneer in low-carbon economics, but because it also wanted to predominate in global governance and lay the foundations for the future economy. Considering China's huge economy and the rapid growth in its emissions, it clearly matters when it comes to energy and climate change. China is developing many energy resources, and putting in place a system that supplies stable, economic and clean energy. It is working hard to develop a recycling economy so it can garner the highest possible economic and social benefits using the least energy possible. Since the late 1990s China has been promoting clean, renewable energy to try to balance growth and environmental concerns and ultimately to reduce its reliance on coal. In 2010 it set the goal of meeting 15 percent of its primary energy consumption through non-fossil fuels by 2020. It is targeting the development of non-fossil energy including wind power, solar power, biomass energy, solar energy, and thermal and nuclear power equivalent to 480 million metric tons of standard coal by the end of 2015, according to the 12th Five-Year Plan (2011-15) for the renewable energy industry issued recently by the National Energy Administration. Hydropower is the leading source of renewable energy. It provides more than 97 percent of all electricity generated by renewable sources. The dams and hydropower plants also play an important role in water resource planning, in preventing flooding, making rivers navigable, solving irrigation problems and creating recreation areas. During the 12th Five-Year Plan China will begin building more than 60 key hydropower projects, and the aim is to have 430 GW of total hydropower installed capacity in the country by 2020. However, debate about the negative impacts of dams and hydropower plants is heated, most of it focused on environmental problems. By the end of 2015 the country's wind power capacity is expected to reach 100 million kW, with annual electricity output of 190 billion kW/h, the plan says. China's wind power will reach 100 million kilowatts by 2015 and annual wind power generation will be 190 billion kilowatt hours. Of that, offshore wind power will account for 5 million kilowatts; solar power will be 15 million kilowatts and annual solar power generation will hit 20 billion kilowatt hours. China enjoys many advantages in developing solar energy. It has become a world leader in photovoltaic cell production. The demand in the country for new solar modules could be as high as 232 mW each year from now until 2012. The government has announced plans to expand the installed capacity to 1,800 mW by 2020. If Chinese companies manage to develop low-cost, reliable solar modules, then the sky is the limit for a country that is desperate to reduce its dependence on coal and oil imports as well as the pressure on its environment by using renewable energy. China has overtaken the US to become the largest producer of zero-carbon energy. The US is the hegemony and China is the rising power, but clean energy will create a new paradigm for relations between the US and China in energy. Cooperation between the two on clean energy is noteworthy, and both countries are leading the world in investing in renewable energy and should seek to resolve trade disputes and eliminate protectionist trade policies. The US should closely look at sales of Chinese renewable energy products in the US market and seek to reduce trade barriers. The difficulty lies not in new ideas, but in escaping from old ones. Whatever the outcomes and motivations, in order to deal with the energy-water-food nexus, China should understand it is in its economic and national interest to move ahead with clean and zero-carbon energy development. Together with recently announced plans, China's clean energy development marks a sea change in the reform of the international system.

#### China is leading on clean energy with wind

Hill 13 (Joshua S. Hill, author and contributor, “China Accounted For 35% Of Global Onshore Wind Capacity,” 02/06/2013, Clean Technica, <http://cleantechnica.com/2013/02/06/china-accounted-for-35-percent-of-global-onshore-wind-capacity/>.)

New figures compiled by Bloomberg New Energy Finance find that China installed 15.9 gigawatts (GW) of wind power in 2012, a number which accounts for 35 percent of the world’s new onshore wind capacity. Astonishingly this is actually an 18 percent drop from 2011′s record of 19.3 GW, a drop blamed on grid connection issues. This is the fourth year in a row since 2009 that China has ranked top of newly installed onshore wind capacity when they took the place from the United States. The US installed 13.2GW in 2012, a record figure for the country, but still 14 percent fewer turbines than China. Electricity generated by onshore wind has become China’s third-largest energy source behind coal and hydropower, totalling 61 GW of cumulative grid-connected wind energy capacity – 5.3% of the country’s total nameplate – and generating 2% of its total electricity. “2012 was a good year for the Chinese wind industry, considering how tough the environment was,” commented Demi Zhu, China wind analyst at Bloomberg New Energy Finance. “The industry faced many problems including a reluctance by the grid operator to buy all the intermittent electricity produced by wind farms, plus stricter permitting requirements, unpaid subsidies and vigorous government efforts to cool down the industry’s rate of expansion.” Financial investment for wind energy in China fell by 12 percent to $27.2 billion in 2012 according to data gathered by Bloomberg New Energy Finance, however this has in turn meant that the same dollar amount of investment committed during 2012 financed 10 percent more megawatts than if it had been invested during 2011. On top of that, Bloomberg New Energy Finance found that a distressing 15 GW was unconnected to the national grid. “This year however, project approvals have sped up and we forecast a modest recovery in both financing activity and construction in 2013,” Zhu said. Looking forward, Bloomberg New Energy Finance are forecasting 16.6 GW of installations for China in 2013, followed by 17 to 18 GW in both 2014 and 2015, rates of increase which would help the Chinese government reach their end-2015 target of 100 GW of grid-connected new energy capacity a year early. In fact, according to GTM Research’s China Wind Market Quarterly, China is likely to shatter that goal by reaching 150 GW by year-end 2015. “The fact that China wind overtook nuclear as a generation source even in its most challenging year of recent times is a testament to the massive scale and momentum of the industry in this country,” Zhu said. Only 0.7 GW of nuclear was installed during 2012, allowing wind energy to become the third largest source of energy, a figure backed up by the China Wind Energy Association in a new report released late last month. China is regularly in the news here on Cleantechnica, exceeding new energy installation records and putting to shame industrialised nations. For sure, China has a more immediate problem to solve — a booming population and horrendously pollutant-driven energy generation — and a massive industry to throw at the problem, but it seems to me that nations across the planet could take lessons from the drive behind China’s new energy revolution.

#### China’s leading the global race for wind now---long term strategy

Bozzato 6/4 Fabrizio Bozzato is a Researcher Assistant at the Centre for International and Regional Affairs of the University of Fiji. He is a PhD candidate at the Graduate Institute of International Affairs and Strategic Studies – Tamkang University, Taiwan. “The Wind Dragon: a Chinese tale of wind power,” 2012, <http://chinaforesight.net/2012/06/04/the-wind-dragon-a-chinese-tale-of-wind-power/>

Because of the hectic pace of China’s economic and social development, Chinese energy demand will continue to grow rapidly in next 40 years. Beijing appears determined to pursue a low-carbon development strategy, and wind energy is going to be one of the main resources for achieving China’s low carbon goals. According to figures released in March 2012 by the China Wind Energy Association, last year **China consolidated its position as the global wind power leader** in both newly and cumulative installed capacities, deploying an impressive 17.6 gigawatts of wind turbines. Notably, by the end of 2011, the added production capability took the national cumulative installed wind power electrical generation to 62.4 gigawatts, up 39.4 percent from the previous year. In December 2011, Longyuan Power, China’s largest wind power developer, connected 99.3 megawatts of wind turbines to the grid in a pilot intertidal wind farm in the Eastern province of Jiangsu. Meanwhile, deep inland, the desert province of Gansu is becoming the frontline of the country’s efforts toward a greener energy mix by massively investing in renewable energy, which includes the erection of wind turbines at the rate of more than one per hour. As impressive as these figures and developments are, so far wind power generation accounts only for 1.5 percent of national power generation. However, China has a grand vision for wind energy. Such a long-term “big plan” is outlined into China’s Wind Power Development Roadmap 2050, a key-document recently issued by the Energy Research Institute of National Development and Reform Commission. The Roadmap foresees Chinese wind power capacity reaching 200 GW by 2020, 400 GW by 2030 and 1 000 GW by 2050, making up 17 percent of the country’s electricity consumption.

#### China’s on track for an offshore wind boom now

Xinhua 12 “Project paves way for offshore wind power boom,” 1/3, <http://www.chinadaily.com.cn/bizchina/2012-01/03/content_14373319.htm>

BEIJING -- China has made **substantial progress** in boosting its burgeoning offshore wind power by launching its largest intertidal wind farm at the end of 2011. On December 28, Longyuan Power, China' s largest wind power developer, connected 99.3 megawatts (MW) of wind turbines to the grid in a pilot intertidal wind farm in Rudong county in eastern province of Jiangsu. Taking into account the existing 32MW turbines, which went into operation in September 2010, Longyuan has 131.3MW turbines integrated to the grid in the pilot wind farm in Rudong. This has made the Rudong intertidal project China's largest offshore wind farm. Intertidal wind farms are a unique form to tap offshore wind power. Intertidal areas cover vast sea regions that are submerged in rising tide and heaved out in ebb tide. According to China's Wind Power Development Roadmap 2050, recently issued by the energy research institute of National Development and Reform Commission, until 2021, China will focus on onshore wind development. Overall, China plans to have 1,000 gigawatts (GW) of installed wind capacity by 2050, making up 17 percent of the country's electricity consumption. So far, wind power generation accounts for 1.5 percent of national power generation. China's only offshore wind farm in commercial operation is the Shanghai East Sea Bridge Offshore Wind Farm, totaling 102 MW. It went into operation in June 2010, using 34 Sinovel 3MW turbines. Longyuan started to construct the Rudong intertidal wind farm in June 2009. The first stage of the pilot project, set to be 150 MW in installation, involves an investment of 2.5 billion yuan ($397 million). It will be fully completed in March 2012, said Zhang Gang, general manager of Longyuan Jiangsu Offshore Wind Power. Zhang said the wind farm will annually generate 330 million kWh of electric power for the grid, saving 97,000 tonnes of standard coal. It can reduce emissions of 267,000 tonnes of carbon dioxide and 1,940 tonnes of sulfur dioxide. Xie Changjun, general manager of Longyuan, said "Our construction of the Rudong pilot intertidal wind farm will lead the way for China to develop offshore wind power, particularly in site selection, planning and design, installation and maintenance." "We will supply a test platform for Chinese offshore wind turbines to go mature. In brief, we will accumulate valuable experiences for China to develop offshore wind power on a large scale," Xie said. INSTALLATION COSTS DROP High installation cost is a major factor restricting the boom of China' s offshore wind power. Industry officials say that offshore wind farm construction costs are mainly wind farm facilities and installations. Wind farm facilities, such as wind turbines, foundations and electric cables, make up 79 percent of the total wind farm construction costs. Installation constitutes 15 percent of total costs. Among the installation costs, installation of turbines and foundations makes up 9 percent and submarine cable pavement 6 percent. Zhang said Longyuan has overcome problems in offshore wind farm construction. It has reached the European advanced level in technology for offshore wind farm construction, while also lowering offshore wind installation costs to 16,000 yuan/kw, about 60 percent of the European level. Zhang said the secret for lower installation costs include improved technology for single pile foundation forms, which Longyuan applied to install 17 turbines, and multi-pile jacket foundation forms, applied to install 21 turbines. "According to the current installation costs and interest rates on loans, we may keep the production costs of offshore wind power to about 0.8 yuan/kwh. We may profit this way," Zhang said.

### Wind Key

#### wind is key---only tech that can meet China’s needs

Martinot 10 Eric Martinot is research director with the Institute for Sustainable Energy Policies in Tokyo, Japan. “Renewable power for China: Past, present, and future,” Frontiers of Energy and Power Engineering in China Vol. 4, No. 3, pp. 287-294, http://www.martinot.info/Martinot\_FEPE4-3.pdf

It appears reasonable to expect that the proposed renewable energy development targets for 2020 introduced at the beginning of this paper will be achieved, perhaps even before 2020. However, prospects for renewables development through 2020 and beyond hinge on the degree to which renewable power technologies can be integrated into power systems on increasing scales, at both centralized and distributed levels, with managed and coordinated approaches among utilities, project developers, consumers, enterprises, and local governments. Wind power **appears to exhibit the most promise for China**. Wind resources in China total at least 250 GW onshore and 750 GW offshore [14,15]. Thus, there is considerable scope for further development for at least another 15 to 20 years. However, offshore wind turbine technology and development planning will become increasingly important as the best onshore sites are used up. The main constraints to wind power development do not appear to be resources or costs, but rather power transmission constraints (between windy regions and population centers) and energy storage constraints. To approach 1000 GW of wind power in the long term would require significant amounts of electricity storage capacity to even out the variations in wind power output on minute-by-minute, hourly, daily, and even seasonal scales.

#### Wind is symbolically key to clean tech leadership

Asmus 11 Peter Asmus, president of Pathfinder Communications, is an internationally known expert on energy and Corporate Social Responsibility (CSR) matters. “Wind: Leader of the renewable power pack,” Oct 24, <http://www.fierceenergy.com/story/wind-leader-renewable-power-pack/2011-10-24>

As the most affordable renewable-energy choice, **wind power has emerged as an** icon **of green technology.** With more than 200 GW of capacity currently up and running, and large companies such as General Electric, Vestas, Siemens, Mitsubishi and BP all investing in the sector, it is clear **this technology has a bright future.** While the North American wind energy industry lags in key areas compared to Europe and Asia, many key industry players are optimistic about the North American market as turbine costs continue to drop dramatically. A total of 5,784 MW of wind capacity was added in North America in 2010, according to Pike Research's report, Wind Energy Outlook for North America. Wind has been tapped as a source of mechanical powers for centuries. Between the 14th and 19th centuries, for example, windmills of various kinds provided as much as a quarter of Europe's total energy needs. Before the advent of the Industrial Revolution, windmills ranked second only to wood fuel as a source of power. Wind, of course, also provided the "fuel" for the sailing vessels of the Age of Discovery. Until the past three decades, its variability and potentially destructive nature have hampered any comprehensive long-term program to convert free and abundant wind power into a major source of electricity. Utilities face challenges Variability of wind power is probably the prime challenge for utilities. Energy company officials worry about maintaining stability of the grid once wind power reaches 10 or 20 percent of total supply. However, smart grid technology as well as a variety of advanced storage devices, will help address those issues. Another challenge for utilities is accessing the best remaining wind resources. This will require investment in new transmission lines. Current regulatory and policy frameworks governing transmission may be a bottleneck for future growth. Grid operators, meanwhile, are changing scheduling protocols and placing a greater emphasis on new wind forecasting technologies as wind becomes a larger and larger portion of total supply. Wind resources are actually a form of solar energy. The uneven heating of the Earth's surface by the sun results in air movements as the atmosphere continuously tries to reach equilibrium. The tilt of the Earth and its daily rotation around the sun are the primary elements shaping wind patterns. However, large bodies of water and the geographic contours of mountain, forest, and desert landscapes (as well as other factors) also contribute to creating regions of the planet where winds blow frequently enough to be harnessed as fuel to generate electricity. The determination of whether potential wind resources can be developed into an economic source of electricity depends upon numerous infrastructure choices, among them the following: Selection of wind turbine technology Affordable interconnections to the transmission grid Siting issues that include concerns of nearby human populations about scenic views and diminished land values Environmental concerns regarding potential collisions of federally protected species of birds and bats with the spinning wind turbine blades Historically, wind power has been one of the lowest cost renewable technologies. This is one reason wind power has led the pack among renewable energy technologies in terms of new capacity additions over the past decade. The diversity in scale -- with wind turbines ranging from less than 1 kW for remote or residential applications all the way up to designs of 10 or even 15 MW for offshore sites -- has allowed wind power to meet the needs of a variety of applications around the world. Indeed, more efficient wind turbine technology has enabled operators to capture more power more of the time, contributing to the wind industry's 21st century growth. The next frontier **Offshore wind power is the next frontier.** The vast majority of existing capacity is utility-scale wind farms deployed on land. The best wind resources, however, are largely untapped because they are located at marine sites that cannot be owned or controlled in the traditional way. These sites are located offshore, typically in shallow ocean waters relatively close to urban population centers.

### Short Shell

A. Interpretation – debate is a game that requires the aff to defend USFG action on energy policy –

#### --‘resolved’ means to enact a policy by law.

Words and Phrases 64 (Permanent Edition)

Definition of the word “resolve,” given by Webster is “to express an opinion or determination by resolution or vote; as ‘it was resolved by the legislature;” It is of similar force to the word “enact,” which is defined by Bouvier as meaning “to establish by law”.

#### --“United States Federal Government should” means the debate is solely about the outcome of a policy established by governmental means

Ericson 3 (Jon M., Dean Emeritus of the College of Liberal Arts – California Polytechnic U., et al., The Debater’s Guide, Third Edition, p. 4)

The Proposition of Policy: Urging Future Action In policy propositions, each topic contains certain key elements, although they have slightly different functions from comparable elements of value-oriented propositions. 1. An agent doing the acting ---“The United States” in “The United States should adopt a policy of free trade.” Like the object of evaluation in a proposition of value, the agent is the subject of the sentence. 2. The verb should—the first part of a verb phrase that urges action. 3. An action verb to follow *should* in the *should*-verb combination. For example, should adopt here means to put a program or policy into action though governmental means. 4. A specification of directions or a limitation of the action desired. The phrase *free trade*, for example, gives direction and limits to the topic, which would, for example, eliminate consideration of increasing tariffs, discussing diplomatic recognition, or discussing interstate commerce. Propositions of policy deal with future action. Nothing has yet occurred. The entire debate is about whether something ought to occur. What you agree to do, then, when you accept the *affirmative side* in such a debate is to offer sufficient and compelling reasons for an audience to perform the future action that you propose.

B. Violation – they claim to win for reasons other than the desirability of that action

C. Reasons to prefer:

**1. Predictability – they allow for infinite frameworks which destroys in-depth preparation and clash – the resolution is the sole source of pre-round prep**

#### 2. Dialogue – debate games open up dialogue which fosters information processing and decision-making – they open up infinite frameworks making the game impossible

Haghoj 8 – PhD, affiliated with Danish Research Centre on Education and Advanced Media Materials, asst prof @ the Institute of Education at the University of Bristol (Thorkild, 2008, "PLAYFUL KNOWLEDGE: An Explorative Study of Educational Gaming," PhD dissertation @ Institute of Literature, Media and Cultural Studies, University of Southern Denmark, http://static.sdu.dk/mediafiles/Files/Information\_til/Studerende\_ved\_SDU/Din\_uddannelse/phd\_hum/afhandlinger/2009/ThorkilHanghoej.pdf)

Debate games are often based on pre-designed scenarios that include descriptions of issues to be debated, educational goals, game goals, roles, rules, time frames etc. In this way, debate games differ from textbooks and everyday classroom instruction as debate scenarios allow teachers and students to actively imagine, interact and communicate within a domain-specific game space. However, instead of mystifying debate games as a “magic circle” (Huizinga, 1950), I will try to overcome the epistemological dichotomy between “gaming” and “teaching” that tends to dominate discussions of educational games. In short, educational gaming is a form of teaching. As mentioned, education and games represent two different semiotic domains that both embody the three faces of knowledge: assertions, modes of representation and social forms of organisation (Gee, 2003; Barth, 2002; cf. chapter 2). In order to understand the interplay between these different domains and their interrelated knowledge forms, I will draw attention to a central assumption in Bakhtin’s dialogical philosophy. According to Bakhtin, all forms of communication and culture are subject to centripetal and centrifugal forces (Bakhtin, 1981). A centripetal force is the drive to impose one version of the truth, while a centrifugal force involves a range of possible truths and interpretations. This means that any form of expression involves a duality of centripetal and centrifugal forces: “Every concrete utterance of a speaking subject serves as a point where centrifugal as well as centripetal forces are brought to bear” (Bakhtin, 1981: 272). If we take teaching as an example, it is always affected by centripetal and centrifugal forces in the on-going negotiation of “truths” between teachers and students. In the words of Bakhtin: “Truth is not born nor is it to be found inside the head of an individual person, it is born between people collectively searching for truth, in the process of their dialogic interaction” (Bakhtin, 1984a: 110). Similarly, the dialogical space of debate games also embodies centrifugal and centripetal forces. Thus, the election scenario of The Power Game involves centripetal elements that are mainly determined by the rules and outcomes of the game, i.e. the election is based on a limited time frame and a fixed voting procedure. Similarly, the open-ended goals, roles and resources represent centrifugal elements and create virtually endless possibilities for researching, preparing, 51 presenting, debating and evaluating a variety of key political issues. Consequently, the actual process of enacting a game scenario involves a complex negotiation between these centrifugal/centripetal forces that are inextricably linked with the teachers and students’ game activities. In this way, the enactment of The Power Game is a form of teaching that combines different pedagogical practices (i.e. group work, web quests, student presentations) and learning resources (i.e. websites, handouts, spoken language) within the interpretive frame of the election scenario. Obviously, tensions may arise if there is too much divergence between educational goals and game goals. This means that game facilitation requires a balance between focusing too narrowly on the rules or “facts” of a game (centripetal orientation) and a focusing too broadly on the contingent possibilities and interpretations of the game scenario (centrifugal orientation). For Bakhtin, the duality of centripetal/centrifugal forces often manifests itself as a dynamic between “monological” and “dialogical” forms of discourse. Bakhtin illustrates this point with the monological discourse of the Socrates/Plato dialogues in which the teacher never learns anything new from the students, despite Socrates’ ideological claims to the contrary (Bakhtin, 1984a). Thus, discourse becomes monologised when “someone who knows and possesses the truth instructs someone who is ignorant of it and in error”, where “a thought is either affirmed or repudiated” by the authority of the teacher (Bakhtin, 1984a: 81). In contrast to this, dialogical pedagogy fosters inclusive learning environments that are able to expand upon students’ existing knowledge and collaborative construction of “truths” (Dysthe, 1996). At this point, I should clarify that Bakhtin’s term “dialogic” is both a descriptive term (all utterances are per definition dialogic as they address other utterances as parts of a chain of communication) and a normative term as dialogue is an ideal to be worked for against the forces of “monologism” (Lillis, 2003: 197-8). In this project, I am mainly interested in describing the dialogical space of debate games. At the same time, I agree with Wegerif that “one of the goals of education, perhaps the most important goal, should be dialogue as an end in itself” (Wegerif, 2006: 61).

#### 3. Politics – debate as a competitive political game is the best framework to solve dogmatism and human brutality

Carter 8 – prof @ The Colorado College, research support from the Rockefeller Foundation and the staff of the Villa Serbelloni, Bellagio, Italy, the Institute of Governmental Studies at the University of California, Berkeley, and the Benezet Foundation at The Colorado College (Lief H, 2008, "LAW AND POLITICS AS PLAY," Chicago-Kent Law Review, 83(3), http://www.cklawreview.com/wp-content/uploads/vol83no3/Carter.pdf)

Vico asked his audience at the University of Naples in 1708 to debate two competing ways of knowing: Cartesian rationality versus the poetic world of the ancients. Vico, the “pre-law advisor” of his day, saw law as a rhetorical game. That is, he understood the civic (ethical) value of competi-tion itself.12 He understood that Cartesian rationality, like religious and ideological fundamentalism, generates a kind of certainty that shuts down robust debate. Vico’s comprehensive vision suggests, in effect, that people should practice law and politics not as the search for the most rational or logically correct outcomes but rather as passionate and embodied yet peaceful competitive play. Vico inspires this vision of law and politics as play because he sees that all things in the human mind, including law and politics, are at one with the human body. As Vico put it as he concluded his 1708 address, “[T]he soul should be drawn to love by means of bodily images; for once it loves it is easily taught to believe; and when it believes and loves it should be inflamed so that it wills things by means of its normal intemperance.”13 Vico had no hope that such abstract moral principles as liberty, equality, justice, and tolerance could effectively offset the “crude and rough” nature of men.14 The Holy Bible and the Qur’an contain normative principles of love, tolerance, equal respect, and peace, but these commands have not forestalled ancient and modern religious warfare. This essay proposes that humans learn how to keep the peace not by obeying the norms, rules, and principles of civil conduct but by learning how to play, and thereby reintegrating the mind and the body. People do law, politics, and economic life well when they do them in the same ways and by the same standards that structure and govern good competitive sports and games. The word “sport” derives from “port” and “portal” and relates to the words “disport” and “transport.” The word at least hints that the primitive and universal joy of play carries those who join the game across space to a better, and ideally safer, place—a harbor that Vico him-self imagined. This essay’s bold proposition honors Vico in many ways. Its “grand theory” matches the scope of Vico’s comprehensive and integrated vision of the human condition. It plausibly confirms Vico’s hope for a “concep-tion of a natural law for all of humanity” that is rooted in human historical practice.15 Seeing these core social processes as play helps us to escape from arid academic habits and to “learn to think like children,” just as Vico urged.16 Imagining law and politics as play honors Vico above all because, if we attain Ruskin’s epigraphic ideal,17 we will see that the peace-tending qualities of sports and games already operate under our noses. Seeing law and politics as play enables us “to reach out past our inclination to make experience familiar through the power of the concept and to engage the power of the image. We must reconstruct the human world not through concepts and criteria but as something we can practically see.”18 If at its end readers realize that they could have seen, under their noses, the world as this essay sees it without ever having read it, this essay will successfully honor Vico. As Vico would have predicted, formal academic theory has played at best a marginal role in the construction of competitive games. Ordinary people have created cricket and football, and common law and electoral politics and fair market games, more from the experience of doing them than from formal theories of competitive games. When they play interna-tional football today, ordinary people in virtually every culture in the world recreate the experience of competitive games. Playing competitive games unites people across cultures in a common normative world.19 Within Vico’s social anthropological and proto-scientific framework, the claim that competitive play can generate peaceful civic life is purely empirical: law and politics in progressively peaceful political systems already are nothing more or less than competitive games. All empirical description operates within some, though too often ob-scured, normative frame. This essay’s normative frame is clear. It holds, with Shaw’s epigraph, above: Human brutalities waged against other hu-mans—suicide bombings, genocides, tribal and religious wars that provoke the indiscriminate rape, murder, torture, and enslavement of men, women, and children, often because they are labeled “evil”—are the worst things that we humans do. We should learn not to do them. In Vico’s anti-Cartesian, non-foundational world, no method exists to demonstrate that this essay’s normative core is “correct,” or even “better than,” say, the core norm holding that the worst thing humans do is dishonor God. Readers who reject Shaw’s and this essay’s normative frame may have every reason to reject the essay’s entire argument. However, this essay does describe empirically how those whose core norm requires honoring any absolute, including God, above all else regu-larly brutalize other human beings, and why those who live by the norms of good competitive play do not. People brutalize people, as Shaw’s Caesar observed, in the name of right and honor and peace. Evaluated by the norm that human brutality is the worst thing humans do, the essay shows why and how the human invention of competitive play short circuits the psy-chology of a righteousness-humiliation-brutality cycle. We cannot help but see and experience on fields of contested play testosterone-charged males striving mightily to defeat one another. Yet at the end of play, losers and winners routinely shake hands and often hug; adult competitors may dine and raise a glass together.20 Whether collectively invented as a species-wide survival adaptation or not, institutionalized competitive play under-cuts the brutality cycle by displacing religious and other forms of funda-mentalist righteousness with something contingent, amoral, and thus less lethal. Play thereby helps humans become Shaw’s “race that can under-stand.”

### 2NC XT Complexity Fails

#### Scenario planning is possible and key to making effective decisions

Kurasawa 4 (Fuyuki, Professor of Sociology – York University of Toronto, “Cautionary Tales: The Global Culture of Prevention and the Work of Foresight”, Constellations, 11(4))

A radically postmodern line of thinking, for instance, would lead us to believe that it is pointless, perhaps even harmful, to strive for farsightedness in light of the aforementioned crisis of conventional paradigms of historical analysis. If, contra teleological models, history has no intrinsic meaning, direction, or endpoint to be discovered through human reason, and if, contra scientistic futurism, prospective trends cannot be predicted without error, then the abyss of chronological inscrutability supposedly opens up at our feet. The future appears to be unknowable, an outcome of chance. Therefore, rather than embarking upon grandiose speculation about what may occur, we should adopt a pragmatism that abandons itself to the twists and turns of history; let us be content to formulate ad hoc responses to emergencies as they arise. While this argument has the merit of underscoring the fallibilistic nature of all predictive schemes, it conflates the necessary recognition of the contingency of history with unwarranted assertions about the latter’s total opacity and indeterminacy. Acknowledging the fact that the future cannot be known with absolute certainty does not imply abandoning the task of trying to understand what is brewing on the horizon and to prepare for crises already coming into their own. In fact, the incorporation of the principle of fallibility into the work of prevention means that we must be ever more vigilant for warning signs of disaster and for responses that provoke unintended or unexpected consequences (a point to which I will return in the final section of this paper). In addition, from a normative point of view, the acceptance of historical contingency and of the self-limiting character of farsightedness places the duty of preventing catastrophe squarely on the shoulders of present generations. The future no longer appears to be a metaphysical creature of destiny or of the cunning of reason, nor can it be sloughed off to pure randomness. It becomes, instead, a result of human action shaped by decisions in the present – including, of course, trying to anticipate and prepare for possible and avoidable sources of harm to our successors. Combining a sense of analytical contingency toward the future and ethical responsibility for it, the idea of early warning is making its way into preventive action on the global stage.

### **2NC Predictions Work**

#### Even if predictions aren’t perfect acting on relative confidence of scenarios materializing is good---the alt is etiher political paralysis or pure reaction

**Ulfelder 11** Jay Ulfelder is Research Director for the Political Instability Task Force, Science Applications International Corporation "Why Political Instability Forecasts Are Less Precise Than We’d Like (and Why It’s Still Worth Doing)" May 5 dartthrowingchimp.wordpress.com/2011/05/05/why-political-instability-forecasts-are-less-precise-than-wed-like-and-why-its-still-worth-doing/

If this is the best we can do, then what’s the point? Well, consider the alternatives. For starters, we might decide to skip statistical forecasting altogether and just target our interventions at cases identified by expert judgment as likely onsets. Unfortunately, those expert judgments are probably going to be an even less reliable guide than our statistical forecasts, so this “solution” only exacerbates our problem.

Alternatively, we could take no preventive action and just respond to events as they occur. If the net costs of responding to crises as they happen are roughly equivalent to the net costs of prevention, then this is a reasonable choice. Maybe responding to crises isn’t really all that costly; maybe preventive action isn’t effective; or maybe preventive action is potentially effective but also extremely expensive. Under these circumstances, early warning is not going to be as useful as we forecasters would like.

If, however, any of those last statements are false–if responding to crises already underway is very costly, or if preventive action is (relatively) cheap and sometimes effective–then we have an incentive to use forecasts to help guide that action, in spite of the lingering uncertainty about exactly where and when those crises will occur.

Even in situations where preventive action isn’t feasible or desirable, reasonably accurate forecasts can still be useful if they spur interested observers to plan for contingencies they otherwise might not have considered. For example, policy-makers in one country might be rooting for a dictatorship in another country to fall but still fail to plan for that event because they don’t expect it to happen any time soon. A forecasting model which identifies that dictatorship as being at high or increasing risk of collapse might encourage those policy-makers to reconsider their expectations and, in so doing, lead them to prepare better for that event.

Where does that leave us? For me, the bottom line is this: even though forecasts of political instability are never going to be as precise as we’d like, they can still be accurate enough to be helpful, as long as the events they predict are ones for which prevention or preparation stand a decent chance of making a (positive) difference.

#### Predictions and scenario building are valuable for decision-making, even if they’re not perfect

**Garrett 12** [Banning, In Search of Sand Piles and Butterflies, director of the Asia Program and Strategic Foresight Initiative at the Atlantic Council.

http://www.acus.org/disruptive\_change/search-sand-piles-and-butterflies]

“Disruptive change” that produces “strategic shocks” has become an increasing concern for policymakers, shaken by momentous events of the last couple of decades that were not on their radar screens – from the fall of the Berlin Wall and the 9/11 terrorist attacks to the 2008 financial crisis and the “Arab Spring.” These were all shocks to the international system, predictable perhaps in retrospect but predicted by very few experts or officials on the eve of their occurrence. This “failure” to predict specific strategic shocks does not mean we should abandon efforts to foresee disruptive change or look at all possible shocks as equally plausible. Most strategic shocks do not “come out of the blue.” We can understand and project long-term global trends and foresee at least some of their potential effects, including potential shocks and disruptive change. We can construct alternative futures scenarios to envision potential change, including strategic shocks. Based on trends and scenarios, we can take actions to avert possible undesirable outcomes or limit the damage should they occur. We can also identify potential opportunities or at least more desirable futures that we seek to seize through policy course corrections. We should distinguish “strategic shocks” that are developments that could happen at any time and yet may never occur. This would include such plausible possibilities as use of a nuclear device by terrorists or the emergence of an airborne human-to-human virus that could kill millions. Such possible but not inevitable developments would not necessarily be the result of worsening long-term trends. Like possible terrorist attacks, governments need to try to prepare for such possible catastrophes though they may never happen. But there are other potential disruptive changes, including those that create strategic shocks to the international system, that can result from identifiable trends that make them more likely in the future—for example, growing demand for food, water, energy and other resources with supplies failing to keep pace. We need to look for the “sand piles” that the trends are building and are subject to collapse at some point with an additional but indeterminable additional “grain of sand” and identify the potential for the sudden appearance of “butterflies” that might flap their wings and set off hurricanes. Mohamed Bouazizi, who immolated himself December 17, 2010 in Sidi Bouzid, Tunisia, was the butterfly who flapped his wings and (with the “force multiplier” of social media) set off a hurricane that is still blowing throughout the Middle East. Perhaps the metaphors are mixed, but the butterfly’s delicate flapping destabilized the sand piles (of rising food prices, unemployed students, corrupt government, etc.) that had been building in Tunisia, Egypt, and much of the region. The result was a sudden collapse and disruptive change that has created a strategic shock that is still producing tremors throughout the region. But the collapse was due to cumulative effects of identifiable and converging trends. When and what form change will take may be difficult if not impossible to foresee, but the likelihood of a tipping point being reached—that linear continuation of the present into the future is increasingly unlikely—can be foreseen. Foreseeing the direction of change and the likelihood of discontinuities, both sudden and protracted, is thus not beyond our capabilities. While efforts to understand and project long-term global trends cannot provide accurate predictions, for example, of the GDPs of China, India, and the United States in 2030, looking at economic and GDP growth trends, can provide insights into a wide range of possible outcomes. For example, it is a useful to assess the implications if the GDPs of these three countries each grew at currently projected average rates – even if one understands that there are many factors that can and likely will alter their trajectories. The projected growth trends of the three countries suggest that at some point in the next few decades, perhaps between 2015 and 2030, China’s GDP will surpass that of the United States. And by adding consideration of the economic impact of demographic trends (China’s aging and India’s youth bulge), there is a possibility that India will surpass both China and the US, perhaps by 2040 or 2050, to become the world’s largest economy. These potential shifts of economic power from the United States to China then to India would likely prove strategically disruptive on a global scale. Although slowly developing, such disruptive change would likely have an even greater strategic impact than the Arab Spring. The “rise” of China has already proved strategically disruptive, creating a potential China-United States regional rivalry in Asia two decades after Americans fretted about an emerging US conflict with a then-rising Japan challenging American economic supremacy. Despite uncertainty surrounding projections, foreseeing the possibility (some would say high likelihood) that China and then India will replace the United States as the largest global economy has near-term policy implications for the US and Europe. The potential long-term shift in economic clout and concomitant shift in political power and strategic position away from the US and the West and toward the East has implications for near-term policy choices. Policymakers could conclude, for example, that the West should make greater efforts to bring the emerging (or re-emerging) great powers into close consultation on the “rules of the game” and global governance as the West’s influence in shaping institutions and behavior is likely to significantly diminish over the next few decades. The alternative to finding such a near-term accommodation could be increasing mutual suspicions and hostility rather than trust and growing cooperation between rising and established powers—especially between China and the United States—leading to a fragmented, zero-sum world in which major global challenges like climate change and resource scarcities are not addressed and conflict over dwindling resources and markets intensifies and even bleeds into the military realm among the major actors. Neither of these scenarios may play out, of course. Other global trends suggest that sometime in the next several decades, the world could encounter a “hard ceiling” on resources availability and that climate change could throw the global economy into a tailspin, harming China and India even more than the United States. In this case, perhaps India and China would falter economically leading to internal instability and crises of governance, significantly reducing their rates of economic growth and their ability to project power and play a significant international role than might otherwise have been expected. But this scenario has other implications for policymakers, including dangers posed to Western interests from “failure” of China and/or India, which could produce huge strategic shocks to the global system, including a prolonged economic downturn in the West as well as the East. Thus, looking at relatively slowly developing trends can provide foresight for necessary course corrections now to avert catastrophic disruptive change or prepare to be more resilient if foreseeable but unavoidable shocks occur. Policymakers and the public will press for predictions and criticize government officials and intelligence agencies when momentous events “catch us by surprise.” But unfortunately, as both Yogi Berra and Neils Bohr are credited with saying, “prediction is very hard, especially about the future.” One can predict with great accuracy many natural events such as sunrise and the boiling point of water at sea level. We can rely on the infallible predictability of the laws of physics to build airplanes and automobiles and iPhones. And we can calculate with great precision the destruction footprint of a given nuclear weapon. Yet even physical systems like the weather as they become more complex, become increasingly difficult and even inherently impossible to predict with precision. With human behavior, specific predictions are not just hard, but impossible as uncertainty is inherent in the human universe. As futurist Paul Saffo wrote in the Harvard Business Review in 2007, “prediction is possible only in a world in which events are preordained and no amount of actions in the present can influence the future outcome.” One cannot know for certain what actions he or she will take in the future much less the actions of another person, a group of people or a nation state. This obvious point is made to dismiss any idea of trying to “predict” what will occur in the future with accuracy, especially the outcomes of the interplay of many complex factors, including the interaction of human and natural systems. More broadly, the human future is not predetermined but rather depends on human choices at every turning point, cumulatively leading to different alternative outcomes. This uncertainty about the future also means the future is amenable to human choice and leadership. Trends analyses—including foreseeing trends leading to disruptive change—are thus essential to provide individuals, organizations and political leaders with the strategic foresight to take steps mitigate the dangers ahead and seize the opportunities for shaping the human destiny. Peter Schwartz nearly a decade ago characterized the convergence of trends and disruptive change as “inevitable surprises.” He wrote in Inevitable Surprises that “in the coming decades we face many more inevitable surprises: major discontinuities in the economic, political and social spheres of our world, each one changing the ‘rules of the game’ as its played today. If anything, there will be more, no fewer, surprises in the future, and they will all be interconnected. Together, they will lead us into a world, ten to fifteen years hence, that is fundamentally different from the one we know today. Understanding these inevitable surprises in our future is critical for the decisions we have to make today …. We may not be able to prevent catastrophe (although sometimes we can), but we can certainly increase our ability to respond, and our ability to see opportunities that we would otherwise miss.

### 2NC Defensive Takeout

#### Scenario Planning is consistent with complexity theory

KAVALSKI ‘7 (Emilian; University of Alberta, “The fifth debate and the emergence of complex international relations theory: notes on the application of complexity theory to the study of international life,” Cambridge Review of International Affairs, v. 20 n. 3, September)

In a further examination of the cognitive perspective, some proponents of CIR theory have suggested ‘scenarios’ as tools for the modelling of complexity (Feder 2002; Harcourt and Muliro 2004). Scenarios are defined as ‘imaginative stories of the future that describe alternative ways the present might evolve over a given period of time’ (Heinzen 2004, 4). They focus on subjective interpretations and perceptions. Understanding complexity, therefore, would depend on the relationship between the ‘cognitive schema’ (that is, available knowledge) and the ‘associative network’ (that is, the activation of the links between different concepts) of the observer (Bradfield 2004, 40). The suggestion is that in some sense ‘we create our own consciousness of complexity by seeking it out’ (LaPorte 1975, 329). In this respect, some proponents of CIR theory have asserted the analysis of discourses as an important distinction between human and nonhuman complex systems (Geyer 2003b, 26).14The intellectual considerations of these epistemological frameworks suggest the challenging conceptual and methodological problems facing CIR theory. On a metatheoretical level, the problem stems from the realization that students of the complexity of international life can never be fully cognizant of the underlying truths, principles and processes that ‘govern reality’ because this would (i) involve (a degree of) simplification of complex phenomena (LaPorte 1975, 50), as well as (ii) imply ‘knowing the not knowable’ (Cioffi-Revilla 1998, 11). As suggested, analytically, the conscious consideration of complexity is hindered by the inherent difficulty of formalizing uncertainty and contingency (Whitman 2005, 105). Some commentators, therefore, have rejected the possibility of constructing comprehensive models for the study of complexity altogether in an attempt to overcome the trap of having to justify their methodologies in ways that are understandable to conventional IR. Therefore, a number of CIR proponents rely on ‘sensemaking’ (Browaeys and Baets 2003, 337; Coghill 2004, 53), ‘whatiffing’ (Beaumont 1994, 171) and other forms of ‘speculative thinking’ (Feder 2002, 114) for their interpretations of the complexity of international life. The claim is that the acceptance of endogeneity as a ‘fact’ of international life provides more insightful modes of analysis than the linear-regression-type approach of traditional IR (Johnston 2005 1040). Without ignoring some controversial aspects of incorporating ontological and epistemological reflection into methodological choices, the claim here is that CIR theory suggests intriguing heuristic devices that both challenge conventional wisdom and provoke analytical imaginations.Complex international relations theory, therefore, proffers analytical tools both for explaining and understanding discontinuities. It is claimed that its approaches offer ‘antidotes’ to the anxiety that randomness engenders in traditional IR as well as provide a paradigm that accepts uncertainty as inevitable (Feder 2002, 117). Thus, in contrast to the typically linear perceptions of change in mainstream IR— that is, changes in variables occur, but the effect is constant—CIR suggests that ‘things suffer change’. The contention is that the unpredictability of the emergent patterns of international life needs to be conceptualized within the framework of self-organizing criticality—that is, their dynamics ‘adapt to, or are themselves on, the edge of chaos, and most of the changes take place through catastrophic events rather than by following a smooth gradual path’ (Dunn 2007, 99). Complex international relations, in other words, suggests that change entails the possibility of a ‘radical qualitative effect’ (Richards 2000, 1). Therefore, the alleged arbitrariness of occurrences that conventional IR might describe as the effects of randomness (or exogenous/surprising shocks) could (and, in fact, more often than not does) reflect ignorance of their interactions. In fact, the reference to ‘chance’ is merely a metaphor for our lack of knowledge of the dynamics of complexity (Smith and Jenks 2006, 273).In this respect, CIR theory sketches the fifth debate in the study of international life (see Table 2). Its outlines follow the proposition of the Gulbenkian Commission to break down the division between ‘natural’ and ‘social’ sciences, since both are pervaded by ‘complexity’. Therefore, scholars should not be ‘conceiving of humanity as mechanical, but rather instead conceiving nature as active and creative [to make] the laws of nature compatible with the idea of novelty and of creativity’ (Wallerstein 1996, 61–63). Complex international relations (unlike other IR approaches) acknowledges that patterns of international life are panarchic ‘hybrids’ of physical and social relations (Urry 2003, 18) and advocates such fusion (through the dissolution of the outdated distinction) of scientific realities (Whitman 2005, 45–64). Its complex adaptive thinking in effect challenges the very existence of ‘objective standards’ for the assessment of competing knowledge claims, because these are ‘not nature’s, but rather always human standards, standards which are not given but made . . . adopted by convention by the members of a specific community’ (Hoffmann and Riley 2002, 304). The complex adaptive thinking of CIR theory, therefore, is an instance of ‘true thinking’—‘thinking that looks disorder and uncertainty straight in the face’ (Smith and Jenks 2006, 4).

### 2NC Heidegger

#### The aff’s use of incentives enframes nature as a set of resources to be actively managed

Bavington 2 (Dean Bavington, Professor in the School of Natural Resources and Environment, specializing in Environmental Justice, at the University of Michigan, 2002, “Managerial ecology and its discontents: exploring the complexities of control, careful use and coping in resource and environmental management,” ENVIRONMENTS, Vol. 30, No. 3, p. proquest)

Throughout Larkin's comments we see the Enlightenment goal of becoming the masters and possessors of biophysical nature lying exposed and debunked - humans may be able to unravel the web of life, but there is no guarantee they can restore it as if they were putting a Newtonian machine back together. When Larkin considers the nature of fishermen however, he finds something stable, simple, certain and hopeful. In the nature of the fishermen Larkin finds a manageable object, something controllable and amenable to mapping, a calculating rational-choice actor, easily guided, manipulated and controlled, able to be carefully used and paternalistically looked after. What Larkin presents as a discovery, however, is actually a complex statement of values and assumptions. He assumes that all fishers have become and always have been homo economicus, rational choice actors who respond to economic carrots and sticks. This "discovery" is valued and coded as hopeful and positive. Without the manageable fisher, Larkin would be hard pressed to discuss management as control or careful use with reference to the world's fisheries. What is evident in Larkin's comments are the multiple meanings of management and the **strong desire to maintain the belief in control and careful use** in the face of expansive management failures that are literally out of control. When impotence and enforced coping is all that is left there are strong desires on the part of managers to restore certainty, control and the possibility of careful use. While ecosocial complexity is often recognized by contemporary resource and environmental management scholars, underlying theories of human motivation, behaviour, values and beliefs remain narrowly focussed on the rational choice actor in resource management theory and practice. When compared to the complexity of global markets and biophysical systems under stress, human values, attitudes, behaviours, motives and beliefs appear relatively simple. Economic globalization, the commodification of social relations and capital expansion in the service sector **have simplified and degraded human beings, their societies, communities, cultures, and the overall context** in which decisions must be made. What is troubling is that from the perspective of managerial ecology's desire for certainty and control this human degradation comes to be seen as an opportunity instead of a horrifying threat.

### 2NC Ecosecurity

#### Resource wars are all hype and your discourse causes them and environmental degradation

Kumari 12 -- International Relations Masters graduate @ University of Nottingham (Parmila, 1/29/12, "Securitising The Environment: A Barrier To Combating Environment Degradation Or A Solution In Itself?" <http://www.e-ir.info/2012/01/29/securitising-the-environment-a-barrier-to-combating-environment-degradation-or-a-solution-in-itself/>)

Secondly, the assertion that environmental degradation is a primary reason of conflict is purely speculative (Barnett 2003:10). Barnett suggests that the ‘evidence’ provided in support is a collection of historical events chosen to support the conflict-scarcity storyline and reify the realist assumption that eventually humans will resort to violence (Barnett 2001:66). This is as opposed to acknowledging that humans are equally capable of adapting. Thirdly, research shows that it is abundance of resources which drives competition, not scarcity (Barnet 2003:11). This makes sense because any territorial conquest to obtain resources will be expensive. A poor country suffering from resource scarcity would not be able to afford an offensive war(Deudney 1990: 309-11). The second and third points mean that environmental-conflict literature counteracts any attempts at solving the problem of environmental degradation. The discourse attributes high intentionality to people-because of scarcity they decide to become violent. This ignores the fact that human actions are not intended to harm the environment. The high intentionality given to people prevents them from being seen as victims who need help. Instead they are pictured as threats to state security. This view can exacerbate ethnic tensions as the state uses minority groups as scapegoats for environmental degradation. It also means that only those involved in conflict are relevant to environmental security, not those who are vulnerable (Detraz and Betsill 2009:307-15). In this way the South is scripted as “primeval Other” (Barnett 2001:65), where order can only be maintained by the intervention of the North, rather than by the provision of aid. The North’s agency in creating the environmental problems is completely erased. Instead environmental degradation is seen from the perspective of the individual state, questioning how it could affect the state, i.e. increased migration (Allenby 2000:18) and this leads to the adoption of narrow policies. Saad has said that securitising the environment in this way allows the North to justify intervening and forcing developing nations to follow policies which encapsulate the North’s norms (Saad 1991:325-7). In this way the powerful become stronger, and the weak weaker. This view may affect the South’s relations with the North. For example, Detraz and Betsill have commented on tensions between the North and South in the 2007 United Nations Security Council debate on climate change. Only 29% of the Southern states compared to 70% of Northern speakers supported the idea of the Security Council being a place to develop a global response to climate change. The reasons for this difference was that shifting decision-making to the Security Council would make Southern states unable to promote efficiently their interests in obtaining resources for climate adaptation and mitigation plans. Furthermore, Egypt and India argued that in suggesting this Northern countries were avoiding their responsibilities for controlling greenhouse gases, by trying to “shift attention to the need to address potential climate-related conflict in the South” (Detraz and Betsill 2009:312). In this way environmental security becomes a barrier because the traditional (realist) concept of security is used to immobilise any action towards dealing with the root causes of environmental degradation.

#### And it reinforces structural violence

Gourevitch 10 (Alex, PhD from Columbia University, teaches at Harvard University, Public Culture 22:3, Fall, “Environmentalism — Long Live the Politics of Fear,” p. 418-424)

Ironically, security is an unstable foundation for the very institutions—the separation of powers, constitutionalism, federalism, civil society — that liberals have sought to rehabilitate. The current way of thinking about security is to isolate the individual from society and, consequently, to make any legal, political, or social arrangement relative to the security of that individual. If these institutions stand in the way of achieving security, then they must, at least temporarily, be set aside. That is why the politics of security is actually associated with a more, not less, arbitrary exercise of power. If there is no higher conception of freedom and the social relationships that realize this freedom — be they private property and the market or collective ownership and democratic control—defining and delimiting the meaning of security, then there is no absolute limit to the exercise of power in security’s name. Nevertheless, liberal societies have been unable to resist seeking out moral and political renewal through making physical security a priority, especially as they have abandoned commitments to the idea of the rational, self-determining individual. Antipolitics Our politics of fear takes the old idea of separating fear and morality and combines it with a more recent definition of security as physical rather than institutional security. The consequence of this new security paradigm is an intensification of antipolitical impulses in our society. Those who actually have to govern amid “moral doubt and political sluggishness” are drawn to the possibility that the struggle for existence, the preservation of bare life, itself might transcend social divisions and unite the public.22 This is a politics of fear, not in the immediate sense of being paranoid, but in the broader sense in which public life is organized around survival. When the security of the individual is made our first principle, then all uncertainties — known and unknown unknowns—take on a dangerous aspect and must be controlled. Risk assessments are not undertaken on a rational basis. Political power is applied for the sake of reassuring us and to minimize even the most improbable risks. - Environmentalism is one of the few movements on the left that presents itself in the same totalizing political terms that the war on terror does on the right. In the American Prospect, the environmental author Ross Gelbspan writes that “humanity is standing at a crossroads between a more just, peaceful world and an increasingly chaotic, turbulent, and authoritarian future driven by a succession of climate-driven emergencies.”23 Every political issue is or can be a green issue. Moreover, environmentalism appears to offer a cooperative, pacific alternative to the fractious militarism of the war on terror. Friedman’s solution for overcoming the “trauma and divisiveness of the Bush years” is “a new green ideology, [which,] properly defined, has the power to mobilize liberals and conservatives, evangelicals, and atheists, big business and environmentalists around an agenda that can both pull us together and propel us forward.”24 Gelbspan and Friedman sound the themes of green revival — peace, unity, and moral renewal. If the connection with the politics of fear is not immediately apparent, let us take environmentalism’s current prophet, Al Gore, as the focal point, as he can neither be dismissed as fringe nor be accused of selling out. In what amounted to a coming-out piece in Vanity Fair in 2006, Gore wrote: There are dire warnings that the worst catastrophe in the history of human civilization is bearing down on us, gathering strength as it comes. . . . This crisis is bringing us an opportunity to experience what few generations in history ever have the privilege of knowing: a generational mission; the exhilaration of a compelling moral purpose; a shared and unifying cause; the thrill of being forced by circumstances to put aside the pettiness and conflict that so often stifle the restless human need for transcendence; the opportunity to rise.25 Even as this passage eloquently condenses the key features of environmentalism as a political ideology, it reproduces the central elements of the security paradigm. Displacing Society in the Name of Security First, notice how the phrase “pettiness and conflict” implies that normal social divisions are meaningless and banal. It is through social categories like class, race, and religion that we normally experience power and inequality and out of which therefore grow political conflicts and social movements. Yet the assertion of any of these divisions is seen as not just petty but, by implication, selfish in the face of a transcendent threat. In fact, the political emptiness of normal social life is a recurrent trope of environmental thought that dates back to its genesis in the New Left. For example, C. B. Macpherson ended his otherwise masterful and influential analysis of “possessive individualism,” first published in 1962, with what at the time no doubt sounded like an eccentric claim: “Technical change . . . has created a new equality of insecurity among individuals, not merely within one nation but everywhere.”26 A book that was largely about key modern debates over property, individualism, and inequality ended with the claim that these political conflicts over equal freedom and social justice now mattered less than mere human survival. Macpherson continued, “The destruction of every individual is now a more real and present possibility” than was once imagined, and it transcends all other issues.27 The claim that universal risks—especially environmental ones — transcend conflicts of national, religious, and class interest is now part of mainstream political sociology. The paradigmatic “supra-national and non-class-specific global hazards” that Ulrich Beck identifies as the defining feature of our “risk society” are the unintended environmental effects of industrialization.28 Moreover, with Friedman and Gore, Beck believes that these global hazards promise “a new type of social and political dynamism” that transcends all social differences.29 This argument perfectly reproduces the antipolitical elements of the politics of fear. Not only is security prior to politics, and politics made to serve the cause of security—understood as physical survival—but all political institutions and social organizations are sacrificed to the task. For Beck, parliamentary democracy loses its validity because of its inability to respond to and handle the complex risks facing society. Writing in the same American Prospect issue as Gelbspan, Thomas Geoghegan advocates in a back-page editorial that “we give up the anachronism of ratifying treaties” and instead essentially ask Congress to grant the president fast-track authority, so that we can make Kyoto domestic law.30 Never mind that the effect of such processes would be to strengthen the executive vis-à-vis the legislature and generally reduce democratic influence over foreign affairs. A Morality of Security Returning to the Gore passage, if normal politics is understood as selfish and corrupt, then from where comes the “compelling moral purpose”? This purpose is defined partially in the negative—as a transcendence of the mucky realm of power and interest. In the positive, this compelling moral purpose is nothing more than a collective struggle for survival. For a brief period after 9/11, commentators on the left and the right believed that America had a chance to attain real unity. After the attacks, the journalist George Packer wrote of the general state of alertness that “what I dread now is a return to the normality we’re all supposed to seek.”31 Disaster comes in many forms—terrorism or ecological catastrophe — but in both cases, the moral purpose it generates is one that is supposed to take us out of our self-regarding, daily existence. Yet this purpose is more meaningless than the ordinary life it condemns. It cannot make sense of our political and social institutions — why we are divided, what to do about inequality and unfreedom—it can only demand that we set those issues aside because something more important — our sheer survival — is at stake. In this sense, environmentalism is as antipolitical as the war on terror. Rather than assess our actual social existence, and make a properly political choice among real alternatives, environmentalism demands that we set all this aside and orient ourselves toward the question of how we are to survive. Scaring Us into Action/Submission Gore’s passage further reveals how environmentalism is another incarnation of the politics of fear. We act, according to Gore, because “the worst catastrophe in the history of human civilization is bearing down on us.”32 Crisis consciousness is a common refrain in environmental thought, and it has made a strong impact on wider culture. From the Day after Tomorrow to Underworld, the cultural representation of environmental disaster has become the newest genre of popular feature films. As Slavoj Žižek has observed, “It seems easier to imagine the ‘end of the world’ than a far more modest change in the mode of production.”33 The authors of the environmentalist self-critique The Death of Environmentalism write: “Most people wake up in the morning trying to reduce what they have to worry about. Environmentalists wake up trying to increase it. We want the public to care about and focus not only on global warming and rainforests but also species extinction, non-native plant invasives, agribusiness, overfishing, mercury, and toxic dumps.”34 Indeed, we might say that the orientation toward catastrophism was highly developed well before terrorists ever reached our shores. The point is not just that environmentalism indulges in a hysterical, cultural impulse. Rather, when catastrophe becomes the cause of political action, it once again serves to repress instead of open up politics. What’s more, as Gore describes it, in the face of environmental crisis we do not make a choice, we simply must act. We are even supposed to experience “the thrill of being forced by circumstances” to engage politically. The blind necessity of acting to save individual and collective existence is supposed to substitute for appealing to the will and reason of human beings. Fundamentally, the impulse here is not to win an argument, and impel people to choose as free beings, but rather to terrorize us into action. Arguing from catastrophe is as morally coercive as the famous “ticking time bomb” torture scenario. Just as Jayasuriya said of the war on terror that there is no time to debate properly political issues of “power and distribution,” the same goes for environmental catastrophe. In the New Left Review, George Monbiot writes that “our proposals and methods must be debated fiercely. . . . But we have so little time.”35 A properly political choice also carries with it the force of necessity. But that kind of necessity means that social conflict has gotten to the point where individuals must recognize their social existence and use their powers of reason and judgment to choose between alternatives. If they are forced by circumstance to act politically, how they act is still a matter of choice, and political choice is presumed to be deliberate choice. That is different from “being forced by circumstance” to act in a particular way. Gore’s “thrill” is not the courageous stance of responsible persons but the exultation of being liberated from the burden of having to choose by the sheer overwhelming force of external necessity—the juggernaut of eco-apocalypse. This “thrill” is just fear — fear that one’s life will be destroyed by nature’s revenge for our moral lassitude. This is not politics, and it is hardly the basis for a moral rejuvenation of an unequal and unjust society.

#### Focusing on policy-making first absolves individual contribution and cedes the political – ensures their impacts are inevitable and is an independent reason to vote negative

Trennel 6 Paul, Ph.D of the University of Wales, Department of International Politics, “The (Im)possibility of Environmental Security”

Thirdly, it can be claimed that the security mindset channels the obligation to address environmental issues in an unwelcome direction. Due to terms laid out by the social contract “security is essentially something done by states…there is no obligation or moral duty on citizens to provide security…In this sense security is essentially empty…it is not a sign of positive political initiative” (Dalby, 1992a: 97-8). Therefore, **casting an issue in security terms** puts the onus of action onto governments**, creating a** docile citizenry **who** await instructions from their leaders as to the next step rather than taking it on their own backs to do something about pressing concerns. This is unwelcome because **governments have limited incentives to act on environmental issues**, as their collectively poor track record to date reveals. Paul Brown notes that “at present in all the large democracies the short-term politics of winning the next election and the need to increase the annual profits of industry rule over the long term interests of the human race” (1996: 10; see also Booth 1991: 348). There is no clearer evidence for this than the grounds on which George W. **Bush explained his decision to opt out of the Kyoto Protocol**: “I told the world I thought that Kyoto was a lousy deal for America…It meant that we had to cut emissions below 1990 levels, which would have meant I would have presided over massive layoffs and economic destruction” (BBC: 2006). The short-term focus of government elites and the long-term nature of the environmental threat means that any policy which puts the burden of responsibility on the shoulders of governments should be viewed with scepticism **as this may have the effect of** breeding inaction on environmental issues. Moreover, governmental legislation may not be the most appropriate route to solving the problem at hand. If environmental vulnerabilities are to be effectively addressed “[t]he routine behaviour of practically everyone must be altered” (Deudney, 1990: 465). In the case of the environmental sector it is not large scale and intentional assaults but the cumulative effect of small and seemingly innocent acts such as driving a car or taking a flight that do the damage. Exactly how a legislative response could serve to alter “non-criminal apolitical acts by individuals” (Prins, 1993: 176- 177) which lie beyond established categories of the political is unclear. Andrew Dobson has covered this ground in claiming that the solution to environmental hazards lies not in piecemeal legislation but in the fostering of a culture of ‘ecological citizenship’. His call is made on the grounds that legislating on the environment, forcing people to adapt, does not reach the necessary depth to produce long-lasting change, but merely plugs the problem temporarily. He cites Italian ‘car-free city’ days as evidence of this, noting that whilst selected cities may be free of automobiles on a single predetermined day, numbers return to previous levels immediately thereafter (2003: 3). This indicates that the deeper message underlying the policy is not being successfully conveyed. Enduring **environmental solutions are likely to emerge only when citizens choose to change their ways** because they understand that there exists a pressing need to do so. Such a realisation is unlikely to be prompted by the top-down, state oriented focus supplied by a security framework.

### 2NC Resources K

#### They frame famine as technically – hunger becomes depoliticized and subject to bureaucratic control – this fuels the security impulse for global intervention

**Edkins 2k** (Jenny, Professor of International Politics – University of Wales, Whose Hunger? Concepts of Famine, Practices of Aid, p. 53-55)

What do the apparently opposing theoretical views of Sen and Malthus have in common? What does the argument that famine is caused by a shortage of food share with the argument that famine is a problem of lost entitlements? There are two points: famine is seen as a failure, and famine has a causal explanation. Famine is a disas­ter with a scientific cause. It is the equivalent of a technical malfunc­tion of a mechanism: once the cause of the problem is identified, it can be solved by prompt expert action and the machine returned to working order. Both Malthus's food shortage and Sen's entitlement theories see famine in this way: as a failure. It is a disaster, whether of a natural or an economic kind, whether it leads to death or to destitution. It is undesirable and preventable: for Malthus, by control of human fertility or by increasing food production; for Sen's followers, by putting in place a mechanism to replace lost entitlements (for example, through cash for work schemes). Neither Malthus nor Sen see famine as produced by the normal run of things; it occurs only exceptionally. Malthus sees famine as benefitting nature, but neither approach attaches importance to famine as benefitting particular groups of people. There is "a prevailing consensus that famine situations are extraordinary and that they should be met by extraordinary means."57 The constitution of famine as a disaster has certain power effects, as Barbara Hendrie points out. Narrating famine in this way produces it as an event and "enables it to be detached from its embeddedness, within a set of historically specific and locally based economic and political processes.58 This decontextualization is what I am calling depoliticization or technologization. The specificities of time and place can be bracketed out and famine can be removed into "the realm of regulation and control by humanitarian institutions."59 Or rather, because the regime of truth of modernity is based around a sci­entific form of knowledge that seeks generalizable, universal laws, famine, in all its specificity and with all its "disturbing implications"60 must inevitably be seen as a disaster if it occurs in modernity. The al­ternative, as I have argued, is to regard it as anachronistic and not part of the modern. Either way, famine is technologized. Famine as failure, as disaster, produces victims. Victims need wel­fare provision or aid, not a political voice. Vulnerable or at-risk households are produced as subjects on whom data can be collected. They are then controlled by administrative mechanisms of food dis­tribution or food aid .61 The process depoliticizes famine and constitutes it as a site for intervention and control. The "famine as failure" narrative has a role in the reproduction of the international system. It is deeply enmeshed in the third world/ first world discourse. The solution to the problems of Africa, for example, is seen as coming from the benevolence of the economically rich countries of the North. Africa is produced as a region that is almost depoliticized by virtue of its status as a recipient of advice, concern, and aid, and existing global structures of power are buttressed. Famine is technologized. Neither food shortage nor entitlement theories provide a historical account nor explore the processes of change that occur during a famine. Preventing famine, as a technical malfunction, favors expert knowledge and expensive (and profitable) technological solutions. It is linked with the centralization of power/knowledge in international organizations or research institutes. In Foucauldian terms, the Science of famine produces the starving subject as a subject of knowledge within a regime of truth produced by the institutions and practices of development studies. The coping strategies of households in famine situations are studied; victims of famine and refugees from famine are interviewed, categorized, and counted. The numbers that died in a particular famine are counted, though how this is possible when conditions in famines are often such that there is even no means of burying the dead, we are left to imagine. A second point of intersection that food shortage and entitlement theories share is that they both see famine as something with a cause. The problem of famine is situated as a question suitable for theoretical investigation by, in a broad sense, the scientific method. The modern episteme is characterized by its reliance on separation of subject and object, theory and practice, and its choice of quantitative methods. This way of thinking produces a discourse that distances the emotional, humane response and prioritizes the search for causa­tion over the need to respond. Theorizing and empiricizing famine make it the terrain of the expert, the agriculturalist, and the develop­ment specialist, just as war can become the terrain of the defense expert, the strategist, and the military commander. Only the experts can tell us how the problem can be tackled and what mechanisms are at work.62 The reliance on experts produces institutions devoted to the production of knowledge about famine within the framework of progress-oriented discourse. Hard facts are sought, and famine is excluded from political debate. As Kirsten Hastrup points out, this reliance on experts and technical solutions represents a gendered approach.63 When famine is looked at in scientific terms, any connec­tion with pain suffering, or the body is taken away. The relationship between persons is removed. Other approaches, as we shall see in the final chapter, locate famines precisely in this relationship: a relationship between winners and losers. They move beyond the view of famine as a failure and look instead at the functions of famine and those who benefit from it.

## 1NR – Politics

### 2NC

#### And it reinforces structural violence

Gourevitch 10 (Alex, PhD from Columbia University, teaches at Harvard University, Public Culture 22:3, Fall, “Environmentalism — Long Live the Politics of Fear,” p. 418-424)

Ironically, security is an unstable foundation for the very institutions—the separation of powers, constitutionalism, federalism, civil society — that liberals have sought to rehabilitate. The current way of thinking about security is to isolate the individual from society and, consequently, to make any legal, political, or social arrangement relative to the security of that individual. If these institutions stand in the way of achieving security, then they must, at least temporarily, be set aside. That is why the politics of security is actually associated with a more, not less, arbitrary exercise of power. If there is no higher conception of freedom and the social relationships that realize this freedom — be they private property and the market or collective ownership and democratic control—defining and delimiting the meaning of security, then there is no absolute limit to the exercise of power in security’s name. Nevertheless, liberal societies have been unable to resist seeking out moral and political renewal through making physical security a priority, especially as they have abandoned commitments to the idea of the rational, self-determining individual. Antipolitics Our politics of fear takes the old idea of separating fear and morality and combines it with a more recent definition of security as physical rather than institutional security. The consequence of this new security paradigm is an intensification of antipolitical impulses in our society. Those who actually have to govern amid “moral doubt and political sluggishness” are drawn to the possibility that the struggle for existence, the preservation of bare life, itself might transcend social divisions and unite the public.22 This is a politics of fear, not in the immediate sense of being paranoid, but in the broader sense in which public life is organized around survival. When the security of the individual is made our first principle, then all uncertainties — known and unknown unknowns—take on a dangerous aspect and must be controlled. Risk assessments are not undertaken on a rational basis. Political power is applied for the sake of reassuring us and to minimize even the most improbable risks. - Environmentalism is one of the few movements on the left that presents itself in the same totalizing political terms that the war on terror does on the right. In the American Prospect, the environmental author Ross Gelbspan writes that “humanity is standing at a crossroads between a more just, peaceful world and an increasingly chaotic, turbulent, and authoritarian future driven by a succession of climate-driven emergencies.”23 Every political issue is or can be a green issue. Moreover, environmentalism appears to offer a cooperative, pacific alternative to the fractious militarism of the war on terror. Friedman’s solution for overcoming the “trauma and divisiveness of the Bush years” is “a new green ideology, [which,] properly defined, has the power to mobilize liberals and conservatives, evangelicals, and atheists, big business and environmentalists around an agenda that can both pull us together and propel us forward.”24 Gelbspan and Friedman sound the themes of green revival — peace, unity, and moral renewal. If the connection with the politics of fear is not immediately apparent, let us take environmentalism’s current prophet, Al Gore, as the focal point, as he can neither be dismissed as fringe nor be accused of selling out. In what amounted to a coming-out piece in Vanity Fair in 2006, Gore wrote: There are dire warnings that the worst catastrophe in the history of human civilization is bearing down on us, gathering strength as it comes. . . . This crisis is bringing us an opportunity to experience what few generations in history ever have the privilege of knowing: a generational mission; the exhilaration of a compelling moral purpose; a shared and unifying cause; the thrill of being forced by circumstances to put aside the pettiness and conflict that so often stifle the restless human need for transcendence; the opportunity to rise.25 Even as this passage eloquently condenses the key features of environmentalism as a political ideology, it reproduces the central elements of the security paradigm. Displacing Society in the Name of Security First, notice how the phrase “pettiness and conflict” implies that normal social divisions are meaningless and banal. It is through social categories like class, race, and religion that we normally experience power and inequality and out of which therefore grow political conflicts and social movements. Yet the assertion of any of these divisions is seen as not just petty but, by implication, selfish in the face of a transcendent threat. In fact, the political emptiness of normal social life is a recurrent trope of environmental thought that dates back to its genesis in the New Left. For example, C. B. Macpherson ended his otherwise masterful and influential analysis of “possessive individualism,” first published in 1962, with what at the time no doubt sounded like an eccentric claim: “Technical change . . . has created a new equality of insecurity among individuals, not merely within one nation but everywhere.”26 A book that was largely about key modern debates over property, individualism, and inequality ended with the claim that these political conflicts over equal freedom and social justice now mattered less than mere human survival. Macpherson continued, “The destruction of every individual is now a more real and present possibility” than was once imagined, and it transcends all other issues.27

The claim that universal risks—especially environmental ones — transcend conflicts of national, religious, and class interest is now part of mainstream political sociology. The paradigmatic “supra-national and non-class-specific global hazards” that Ulrich Beck identifies as the defining feature of our “risk society” are the unintended environmental effects of industrialization.28 Moreover, with Friedman and Gore, Beck believes that these global hazards promise “a new type of social and political dynamism” that transcends all social differences.29 This argument perfectly reproduces the antipolitical elements of the politics of fear. Not only is security prior to politics, and politics made to serve the cause of security—understood as physical survival—but all political institutions and social organizations are sacrificed to the task. For Beck, parliamentary democracy loses its validity because of its inability to respond to and handle the complex risks facing society. Writing in the same American Prospect issue as Gelbspan, Thomas Geoghegan advocates in a back-page editorial that “we give up the anachronism of ratifying treaties” and instead essentially ask Congress to grant the president fast-track authority, so that we can make Kyoto domestic law.30 Never mind that the effect of such processes would be to strengthen the executive vis-à-vis the legislature and generally reduce democratic influence over foreign affairs. A Morality of Security Returning to the Gore passage, if normal politics is understood as selfish and corrupt, then from where comes the “compelling moral purpose”? This purpose is defined partially in the negative—as a transcendence of the mucky realm of power and interest. In the positive, this compelling moral purpose is nothing more than a collective struggle for survival. For a brief period after 9/11, commentators on the left and the right believed that America had a chance to attain real unity. After the attacks, the journalist George Packer wrote of the general state of alertness that “what I dread now is a return to the normality we’re all supposed to seek.”31 Disaster comes in many forms—terrorism or ecological catastrophe — but in both cases, the moral purpose it generates is one that is supposed to take us out of our self-regarding, daily existence. Yet this purpose is more meaningless than the ordinary life it condemns. It cannot make sense of our political and social institutions — why we are divided, what to do about inequality and unfreedom—it can only demand that we set those issues aside because something more important — our sheer survival — is at stake. In this sense, environmentalism is as antipolitical as the war on terror. Rather than assess our actual social existence, and make a properly political choice among real alternatives, environmentalism demands that we set all this aside and orient ourselves toward the question of how we are to survive. Scaring Us into Action/Submission Gore’s passage further reveals how environmentalism is another incarnation of the politics of fear. We act, according to Gore, because “the worst catastrophe in the history of human civilization is bearing down on us.”32 Crisis consciousness is a common refrain in environmental thought, and it has made a strong impact on wider culture. From the Day after Tomorrow to Underworld, the cultural representation of environmental disaster has become the newest genre of popular feature films. As Slavoj Žižek has observed, “It seems easier to imagine the ‘end of the world’ than a far more modest change in the mode of production.”33 The authors of the environmentalist self-critique The Death of Environmentalism write: “Most people wake up in the morning trying to reduce what they have to worry about. Environmentalists wake up trying to increase it. We want the public to care about and focus not only on global warming and rainforests but also species extinction, non-native plant invasives, agribusiness, overfishing, mercury, and toxic dumps.”34 Indeed, we might say that the orientation toward catastrophism was highly developed well before terrorists ever reached our shores. The point is not just that environmentalism indulges in a hysterical, cultural impulse. Rather, when catastrophe becomes the cause of political action, it once again serves to repress instead of open up politics. What’s more, as Gore describes it, in the face of environmental crisis we do not make a choice, we simply must act. We are even supposed to experience “the thrill of being forced by circumstances” to engage politically. The blind necessity of acting to save individual and collective existence is supposed to substitute for appealing to the will and reason of human beings. Fundamentally, the impulse here is not to win an argument, and impel people to choose as free beings, but rather to terrorize us into action. Arguing from catastrophe is as morally coercive as the famous “ticking time bomb” torture scenario. Just as Jayasuriya said of the war on terror that there is no time to debate properly political issues of “power and distribution,” the same goes for environmental catastrophe. In the New Left Review, George Monbiot writes that “our proposals and methods must be debated fiercely. . . . But we have so little time.”35 A properly political choice also carries with it the force of necessity. But that kind of necessity means that social conflict has gotten to the point where individuals must recognize their social existence and use their powers of reason and judgment to choose between alternatives. If they are forced by circumstance to act politically, how they act is still a matter of choice, and political choice is presumed to be deliberate choice. That is different from “being forced by circumstance” to act in a particular way. Gore’s “thrill” is not the courageous stance of responsible persons but the exultation of being liberated from the burden of having to choose by the sheer overwhelming force of external necessity—the juggernaut of eco-apocalypse. This “thrill” is just fear — fear that one’s life will be destroyed by nature’s revenge for our moral lassitude. This is not politics, and it is hardly the basis for a moral rejuvenation of an unequal and unjust society.

### 2NC Multi-Condo Good

**Condo’s good**

**1. Neg flex – can’t use kritiks and counterplans and test the aff from different angles**

**2. Information processing – multiple choices make for more tactile and harder debate – fosters 2ac tech skills**

**3. Real-world – policy-makers aren’t forced to stick to their opinions if they realize a flaw**

**[4. Research – sides have to learn a broader variety of issues instead of relying on generics**

**5. Checks new affs – neg needs to be able to test multiple options on the fly]**

**Counter-interpretation – we get** 2 cp’s **– it’s a logical fixed limit that mitigates their offense**

**Not a voter –**

**[If going for] just a reason to stick us with the CP – solves 1AR allocation**

**[If not going for] just a reason conditional worlds should be banned – solves 1AR allocation**

**AT: Strat Skew**

**No reason we skewed you any more than disads, T, or impact turns would – our advocacies aren’t contradictory**

**AT: In-depth education**

**2NR checks – still gain education but are forced to think about time allocation too – eventually will come down to the best option**

**AT: Neg Bias**

**Aff has first and last speech, gets to pick the focus of the debate, and can go for a single dropped arg in the 2ar – this topic proves there is no predictable neg ground**

**No C/I means weigh against uncondo and err neg**

### U – No Wind

#### Wind use is tiny and falling now

Goldenberg 12/1 Suzanne is a writer for The Guardian. “US government announces opening of Atlantic coast for offshore windfarms,” 2012, http://www.guardian.co.uk/environment/2012/dec/01/us-government-offshore-wind-farms-atlantic

If any turbines do actually go up, they would constitute the first offshore wind projects in the US. Over the last few years vast wind farms, with hundreds of turbines, have been built across the country – although wind power still makes up only 3% of energy use. However, the wind industry is expected to slow down or even come to a halt at the end of the year, with the expiry of tax credits.

#### Wind’s declining--- our ev is future predictive

Kachan 12/5 Dallas is a guest writer for the Christian Science Monitor. “Cleantech on the decline? Predictions for 2013,” 2012, http://www.csmonitor.com/Environment/2012/1205/Cleantech-on-the-decline-Predictions-for-2013

Long term risk emerges for solar and wind – The solar and wind markets suffer today from margin erosion, allegations of corruption, international trade impropriety and other challenges. In 2013, we think poor progress in grid-scale power storage technology will also start to put downward pressure on solar and wind growth figures. Prices per kilowatt hour are falling, yes, but the cost of flow batteries, molten salt, compressed air, pumped hydro, moving mass or other storage technology needs to be factored in to make intermittent clean energies reliable and available 24/7. When also considering continued progress in cleaner baseload power from new, emerging nuclear technologies, natural gas and cleaner coal power, the growth rates for solar and wind appear increasingly at risk.

### A2: Wind Now

#### No expansion of wind power

Institute for Energy Research 1-16 (“PTC Extension Passes; Layoffs and Cancellations Continue,” Canada Free Press, 2013, http://www.canadafreepress.com/index.php/article/52453)

Congress passed an expansion of the wind production tax credit (PTC) in the recent “fiscal cliff” legislation, but employee layoffs and wind project cancellations continue. Why? Because, as we have previously written, the market has become saturated in areas where renewable portfolio standard mandates have been reached—or more than reached—and issues surrounding the use of wind are becoming more apparent including costs, visual and noise pollution, bird kills, and havoc to other more reliable and affordable technologies due to the instability it causes to the electric grid. U.S. energy policy as represented by the PTC’s expansion continues the “reality debt” being accrued by the government, which ultimately will have to be paid by U.S. citizens. Last week, the Danish company Vestas announced additional personnel cutbacks at several of its Colorado facilities in spite of the PTC extension that should be sending people in the wind industry back to work. Vestas put its workers at several of their Colorado facilities on a 24-hour work week this month.[ia] Further, Vestas still plans on eliminating 2,000 jobs this year reducing its work force from 18,000 to 16,000 employees by the end of the year. These job losses will occur in several countries including the United States. According to a company statement, “The extension of the PTC does not affect Vestas’ projections to deliver about 5 gigawatts this year and to employ about 16,000 people by the end of 2013.”[ii] Iberdrola Renewables, a Spanish company, has confirmed that it will no longer pursue developing a wind farm in Hammond, New York. Further, a spokesperson for the company indicated that Iberdola is cancelling 100 wind projects in the United States.[iii] The Production Tax Credit Extension Congress extended the production tax credit for wind for ‘one year’ in the ‘fiscal cliff’ bill that passed January 1. The credit provides 2.2 cents per kilowatt hour for electricity generated for the first 10 years of operation of the wind unit. Therefore, if wind investors are eligible to receive the PTC, they get it for 10 years in a row. While the original PTC stipulated that the wind unit must begin operation in the year of the credit, the extension that was passed only indicates that the project must begin construction in the initial year and that the unit has 2 more years to become operational. According to Senator Udall, “So if you put a shovel in the ground on Dec. 31, at the end of this year(2013), the tax credit will apply, in effect a two-year extension, and some might argue it would take the form of a three-year extension because some projects take more than a year” to get off the ground. It is therefore a significant expansion of the current law. The wind industry is hoping that the Obama administration defines beginning “construction” very loosely; even more loosely than when Sen. Udall suggested they would qualify by putting a “shovel in the ground.” According to Politico, wind developers hope the federal government follows the Department of Energy’s example in the 1603 grant program and defines “construction” merely as when 5 percent of the total cost of the project has been invested. According to the Joint Committee on Taxation, the expansion of the qualifying criteria for the PTC means that the credit will cost taxpayers over $12 billion over 10 years, or over a billion dollars per year. Xcel Energy, which is one of the top 10 biggest utilities in the country and had the largest wind capacity of any utility in 2011, is concerned that the PTC helps wind developers to the exclusion of customers. The PTC is a tax credit that goes to wind-energy developers, but does not benefit customers paying electricity bills or the utilities buying wind from renewable-energy generators. As a result, a spokesperson for Xcel Energy indicated that **the company may not buy any more wind power**.[iv] Impact of Renewable Portfolio Standards on Wind Power Thirty states and the District of Columbia have renewable portfolio standards (RPS) that mandate specific levels of power to be generated by qualifying renewable technologies on a given timeline, and 7 other states have voluntary goals. Since onshore wind is the lowest cost qualifying renewable generating technology, it has been the major recipient of the mandate, obtaining 90 percent of the RPS market. As the graph below shows, the PTC was first passed in 1992, but it did little to generate interest in the wind industry in the 1990s. Once Texas introduced its RPS in 1999 and most other states followed between 2004 and 2007, wind construction began to take off. The importance of the RPS compared to the PTC can be seen from NextEra Energy Resources, a major wind developer, in its most recent Third Quarter earnings report, “we signed our first PPA for 2013 U.S. wind project, a project that is not dependent upon extension of the PTC program…we see it as supportive of the view we have publicly expressed that there will continue to be a wind development business in the U.S. post-2012 even if the PTC program is not extended.”[v] Issues with Wind Power Adapting wind power into the electric grid is one of the main issues facing it and other sources of intermittent renewable energy generation. Power plant and electric grid operators consistently attempt to match electricity demand, i.e. what people’s TVs, appliances, computers, and other electronic devices need, and the output from their generators. Because wind and solar energy are “unpredictable” sources of electricity, i.e. the amounts of electricity they produce are consistent only with wind speeds and the degree of sunlight received by panels, other sources of generation must be used to back-up these intermittent sources. This can cause havoc to baseload generators that have to pay fines when they cannot scale down their generation when the wind does blow, or hydroelectric power units that face issues with salmon and other fish runs if required to adjust their output when wind does produce. Hydroelectric dams are the largest renewable energy source for electricity in the United States. Where natural-gas fired technology is available, the back-up power issue is less onerous, but the amount of wind power on-line now is stretching beyond our natural gas-fired generating capacity to serve as back-up in some areas of the country, resulting in coal or nuclear units being asked to ramp up or down according to wind production. Intermittency is not the only issue. Noise pollution is bothering residents who live near wind farms. For example, a couple had to abandon their home near Denmark, Wisconsin, because of the unbearable low-frequency noise produced by a half-dozen wind turbines that were built near their home. Shortly after the turbines began operating, the couple began experiencing numerous symptoms, including “headaches, ear pain, nausea, blurred vision, anxiety, memory loss, and an overall unsettledness.”[vi] Wind shadow flicker has also caused concern in Wisconsin where the turning of the blades is causing shadows that “flicker” removing sunlight at intermittent periods. And, in Maine, local residents have complained about noise, low frequency sound pressure and vibrations that turbines and their blades make under various wind conditions due to insufficient setback distances. Setback distances are based on safety guidelines from the turbine manufacturer.[vii] Wind turbine blades have killed birds and bats that have come within their path. For example, conservation groups have asked the Fish and Wildlife Service to reduce birds and bats being killed at the 28-turbine Criterion Wind Project, located near Oakland, Maryland, about 175 miles northwest of Washington, D.C. It is believed that this wind farm ranks as the deadliest to birds and bats in the United States on a per-turbine basis. Because bats eat insects that are agricultural pests, bat losses at wind projects are detrimental to agriculture resulting in farmers either suffering agricultural losses or having to use more insect-controlling poisons on crops. Neither option is appealing or economic.[viii] While bird, bat and other wildlife deaths are a factor in wind production, wind power actually gets an indirect subsidy from being exempt from enforcement from wildlife laws. According to energy expert Robert Bryce, “Despite numerous violations, the Obama administration—like the Bush administration before it—has unofficially exempted the wind industry from prosecution under the Eagle Protection and Migratory Bird Treaty Acts. If Congress extends the PTC, federal taxpayers will, in effect, be subsidizing the killing of federally protected birds.”[ix] Obviously, wind power ‚Äì like all energy sources—is neither free nor without impacts, despite claims that it is both by supporters. Conclusion Thanks to President Obama as well as Senators John Thune, Chuck Grassley and other wind electricity supporters, the production tax credit got a reprieve, costing taxpayers over $12 billion for a ‘one year’ extension for a tax credit that has been around for 20 years and should have already accomplished its job.[x] But, unfortunately, to taxpayers, the expense of the PTC was not needed since another policy implemented by over half our states is driving most of the wind capacity additions. That policy, the RPS, is completely disconnected from market reality and cost-benefit considerations since the technologies that it promotes are not economic and are increasing the cost of electricity to consumers. The mandate requiring a certain amount of energy be purchased from such sources is prima facie evidence of its disconnection from costs and markets. But, regardless of the PTC extension, wind power is reaching a saturation point for the next several years as some RPS’ are exceeding their mandates and wind companies are laying off personnel and cancelling projects as in the case of Vestas and Iberdrola. We can thank the President and Congress for here again spending our money foolishly on policies that drive up energy costs, destabilize the electric grid and simply do not make sense. Ultimately, the “reality debt,” like the fiscal debt, will have to be repaid.

**UQ now proves**

### A2: Ablism

Changing language fails—the term will just be replaced by worse ones

Zizek, 1999 (Slavoj, Senior Researcher at the Institute for Social Studies, Ljubljana, The Ticklish Subject, p.253-4)

Take politically correct probing into hate speech and sexual harassment: the trap into which this effort falls is not only that it makes us aware of (and thus generates) new forms and layers of humiliation and harassment (we learn that 'fat', 'stupid', 'short-sighted' …are to be replaced by 'weight-challenged', etc.); the catch is, rather, that this censoring activity itself, by a kind of devilish dialectical reversal, starts to participate in what it purports to censor and fight - is it not immediately evident how, in designating somebody as 'mentally challenged' instead of 'stupid', an ironic distance can always creep in and give rise to an excess of humiliating aggressivity - one adds insult to injury, as it were, by the supplementary polite patronizing distension (it is well known that aggres­sivity coated in politeness can be much more painful than directly abusive words, since violence is heightened by the additional contrast between the aggressive content and the polite surface form ...). In short, what Fou­cault's account of the discourses that discipline and regulate sexuality leaves out of consideration is the process by means of which the power mechanism itself becomes eroticized, that is, contaminated by what it endeavours to 'repress'. It is not enough to claim that the ascetic Christian subject who, in order to fight temptation, enumerates and categorizes tile various forms of temptation, actually proliferates the object he tries to combat: the point is, rather, to conceive of how the ascetic who flagellates in order to resist temptation finds sexual pleasure in this very act of inflicting wounds on himself.

#### Representations don’t influence reality

Kocher 00 (Robert L., Author of “The American Mind in Denial” and Philosopher, “Discourse on Reality and Sanity”, http://freedom.orlingrabbe.com/lfetimes/reality\_sanity1.htm)

While it is not possible to establish many proofs in the verbal world, and it is simultaneously possible to make many uninhibited assertions or word equations in the verbal world, it should be considered that reality is more rigid and does not abide by the artificial flexibility and latitude of the verbal world. The world of words and the world of human experience are very imperfectly correlated. That is, saying something doesn't make it true. A verbal statement in the world of words doesn't mean it will occur as such in the world of consistent human experience I call reality. In the event verbal statements or assertions disagree with consistent human experience, what proof is there that the concoctions created in the world of words should take precedence or be assumed a greater truth than the world of human physical experience that I define as reality? In the event following a verbal assertion in the verbal world produces pain or catastrophe in the world of human physical reality or experience, which of the two can and should be changed? Is it wiser to live with the pain and catastrophe, or to change the arbitrary collection of words whose direction produced that pain and catastrophe? Which do you want to live with? What proven reason is there to assume that when doubtfulness that can be constructed in verbal equations conflicts with human physical experience, human physical experience should be considered doubtful? It becomes a matter of choice and pride in intellectual argument. My personal advice is that when verbal contortions lead to chronic confusion and difficulty, better you should stop the verbal contortions rather than continuing to expect the difficulty to change. Again, it's a matter of choice. Does the outcome of the philosophical question of whether reality or proof exists decide whether we should plant crops or wear clothes in cold weather to protect us from freezing? Har! Are you crazy? How many committed deconstructionist philosophers walk about naked in subzero temperatures or don't eat? Try creating and living in an alternative subjective reality where food is not needed and where you can sit naked on icebergs, and find out what happens. I emphatically encourage people to try it with the stipulation that they don't do it around me, that they don't force me to do it with them, or that they don't come to me complaining about the consequences and demanding to conscript me into paying for the cost of treating frostbite or other consequences. (sounds like there is a parallel to irresponsibility and socialism somewhere in here, doesn't it?). I encourage people to live subjective reality. I also ask them to go off far away from me to try it, where I won't be bothered by them or the consequences. For those who haven't guessed, this encouragement is a clever attempt to bait them into going off to some distant place where they will kill themselves off through the process of social Darwinism — because, let's face it, a society of deconstructionists and counterculturalists filled with people debating what, if any, reality exists would have the productive functionality of a field of diseased rutabagas and would never survive the first frost. The attempt to convince people to create and move to such a society never works, however, because they are not as committed or sincere as they claim to be. Consequently, they stay here to work for left wing causes and promote left wing political candidates where there are people who live productive reality who can be fed upon while they continue their arguments. They ain't going to practice what they profess, and they are smart enough not to leave the availability of people to victimize and steal from while they profess what they pretend to believe in.

#### Using visual metaphors like see in their o’leary evidence negatively characterizes disability in opposition to knowledge– turns offense

**Ferri & May 5** [Beth – Assoc Prof Disability Studies, Syracuse Univ; Vivian – Asst Prof Women’s Studies, Syracuse Univ; , “Fixated on Ability: Ableist metaphors in feminist theories of resistance,” Prose Studies, v27, http://syr.academia.edu/BethFerri/Papers/160692/Fixated\_on\_Ability\_Questioning\_Ableist\_Metaphors\_in\_Feminist\_Theories\_of\_Resistance]

**A range of disabilities are employed for their "metaphoric" value**. In her poem, "Tomorrow I Am Going To Re–write The English Language," Lois Keith suggests a need to replace "striving ambulist metaphors/ Of power and success" (which include standing on your own two feet, making great strides, standing up for yourself, and standing tall) with alternatives that mirror her way of being and moving through space (57 59). Likewise, Georgina Kleege provides us with a litany of **common figurative uses of the word blind, including: blind faith, blind trust, blind spot, blindside, blind leading the blind, and following blindly** (21 22). Nancy Mairs also highlights "the extent to which we equate physical vigor with positive moral qualities: ... |keep| 'your eyes open' (alertness); .. .(standj 'tall' (pride); ... 'see eye to eye' (accord); 'run rings around' (superiority)" *(The View* 215). Conversely, Mairs notes, "physical debility connotes vice, as in 'sit on your ass' (laziness), 'take it lying down' (weakness), 'listen with half an ear' (inattention), and get left 'without a leg to stand on' (unsound argument)" (215). In other words, **when disability shows up in our everyday language it almost always signals ignorance, confusion, lack, absence, and ineptitude**. **Ableist metaphors also slip into scholarly discourse as evidence of any number of negative qualities or attributes.** As Lennard Davis reminds us, **academics "routinely turn a** 'deaf ear' |or **[‘a blind eye] or find** |**a**n argument) 'lame' or a **political act 'crippling**"' (87). **Unfortunately, scholars within interdisciplinary areas of study**, as well as those in the traditional disciplines, **have been slow to recognize disability studies as a legitimate area of inquiry. This inability to analyze disability through a critical framework further demonstrates the problems with passive empathy or identification, analogic bridging, and assuming the reversibility of experiences.** As Iris Marion Young reminds us, "the idea of reversing perspectives assumes that the perspectives brought to a situation are equally legitimate. Where structural social injustice exists, this may not be true" (48). Thus Davis wonders if "critics of the future will be astounded, puzzled, and disturbed" that works by some of our most known and highly regarded critical scholars "managed to steer so completely away from any discussion of disability" (87). With Davis' question in mind, we are particularly troubled by the ubiquitous use of ableist metaphors in feminist discourses. In fact, our interest in this project grew as we noticed how frequently scholars whom we otherwise greatly admire use disability in problematic ways. It is important to note that we have focused our attention primarily on some of our most favorite contemporary scholars those whose work we have found to be provocative, insightful, critical, and creative. In addition, we find ourselves troubled by close colleagues and friends (as well as our own oversights)—in other words, we butt up against ableist practices in feminism on a daily basis, whether through peer interaction or on the page. For example, recently one of us had to interrupt her feminist theory reading group to request that discussants please stop using blind, blindness, paralyzed, and deafness to critique the perceived deficiencies and oversights in that week's readings. The room stopped dead, she was stared at in total incomprehension, and then the group continued on without a second thought to the request or its meaning. Recently, a similar situation occurred on a feminist philosophy listserv we subscribe to. In response, Shelley Tremain requested that list participants stop relving on ableist notions of disability as a means of critiquing homophobia and conservative backlash at the state and federal level. She wrote: 1 am quite surprised that contributors to this thread have been tossing around the terms 'insane,' 'sane,' 'delusional,' [and| 'mental illness' so uncritically, carelessly, and sarcastically.. ..1 wonder if any of the contributors to the thread (about Virginia outlawing same–sex marriage contracts] have a political analysis of disability, of psychiatrization, |or] of forcible confinement.. ..Should feminists begin the practice of pathologizing individuals (even if only in jest) in order to deal with social problems? (April 27, 2004 FEAST–L). **We offer these examples not as extraordinary, but as rather mundane**. **What they suggest is a problem of understanding.** As philosopher Susan Babbitt explains, understanding frequently operates according to a binary (either something fits ready–made frames of reference or it is incommensurable, outside of logic). In situations where marginalized experience and knowledge are concerned, Babbitt therefore argues that it is often *not* a "matter of being ignored or even misunderstood" that is the core problem. Rather, it is a matter of "being understood all too well in a way that disallows recognition that there is still something that needs to be understood" (303). In other words, **what is missing in much feminist discourse that seems to so easily use disability without a second thought as to its meaning is both a "cognitive need" and a "shifted orientation" toward experiences and knowledges that are different and that do not conform to sedimented frames of reference or epistemic models,** 'Thus Babbitt argues for the need to develop a cognitive awareness of a *lack of understanding* (in this case, of disability as complex and as intersecting with other layers of power and identity) in order for change to be possible (311). This lack of understanding of disability, or a presumed understanding of disability that fixes its meaning in stereotypical ways, is all too common, but **we have noticed two predominant trends in feminist and critical race theorizing: the tendency to characterize disability in opposition to knowledge or insight** (this characterization can be both negative/stigmatized or positive/romanticized); **and the use of disability**\* to identify and describe objects of remediation (**to critique dominant ideologies which are imbued with unacknowledged power and privilege** or to name and reject the effects of oppression). Constructing Disability in Opposition to Knowledge Surprisingly, **many theorists continue to rely on disability as a metaphor for ignorance, stupidity**, **oversight**, **or general incompetence** as a knower. **For example, mixing metaphors of muteness and blindness to underscore exclusions in feminist thinking, Ann DuCille critiques "the silence (and the blindness) of feminism**" (247). **bell hooks uses ableist metaphors to highlight sexist thinking on the part of** Paulo **Freire**. She writes: "For me this Ipatriarchal paradigm of liberation) is always a source of great anguish for it represents a blind spot in the vision of men [like Freire) who have profound insight" (49). Here, Freire's blind spot is his lack of awareness of sexism, which hooks places in opposition to his great insight and otherwise redeemable vision about the politics of race, ethnicity, and social class resistance. Of course, hooks is not alone in her use of visual metaphors for knowing or insight, For example, we found that we, too, relied on the notion of sight to signify understanding in an earlier co–authored article on disability and him (May and Herri 135). Yet **equating visuality and knowing is not innocent it has**, of course, **a history**. For instance, **many have argued that it is an episteme foundational to practices empire building and colonial cartography, of'looking out" over or surveying lands and their inhabitants as property to be conquered or developed** (e.g., Duncan). **Moreover, by reinscribing vision as knowledge** (and, directly or indirectly, blindness as ignorance), **visual metaphors for knowing or insight can reinforce Manichean dualisms of mind/body, I/not–1 in the name of liberation politics**. **Equating visual acuity with knowing is one common way to place disability in opposition to knowledge**. But many others are equally as frequent, including dualisms between mental illness and rationality and/or characterizations of faulty knowledge models as "pathologies" or "illnesses." For example, because Frederic Jameson relies heavily on ableist notions of schizophrenia and pathological illness in his critique of the postmodern subject, these ideas infiltrate Chela Sandoval's reading and critique of Jameson. Sandoval writes that for Jameson, the "euphoria" of the postmodern subject "marks the onset of a new form of mass cultural pathology. It is 'schizophrenic' in nature charged with hallucinogenic intensity" (21). Similarly, June Jordan (in Collins, *Fighting* 150) describes constructivist approaches to identity as a "delusional disease." In asserting her own social theory\*, Patricia Hill Collins writes that deconstructivist theory can be "crippling" because it "runs in circles" and fosters nihilism (Fighting 189). Once again, disability is enlisted to represent foolishness and despair.

### Impact 2NC

#### DA outweighs the case ---

#### Escalation is highly probable.

**Geller 2005** (Daniel S. – Professor and Chair of the Department of Political Science at Wayne State University, The India-Pakistan Conflict: An Enduring Rivalry, Ed. T. V. Paul, p. 99)

In fact, both the May-July 1999 military engagement between India and Pakistan over Kashmir and the crisis of December 2001-June 2002 after the terrorist attack on the Indian Parliament mirrored the conflict escalation pattern for nuclear-armed states. Each side initiated troop mobilization and general military alerts, coupled with the evacuation of civilians from border-area villages. However, the outcome of the future confrontations for India and Pakistan may not adhere to the pattern established by other nuclear dyads. Elements are present in this dyad that were largely absent between other nuclear-armed antagonists and that make the escalation of war more probable. Among those factors are the presence of a contiguous border between India and Pakistan, a history of multiple wars, and an ongoing territorial dispute. These factors, among others,79 increase the likelihood that an Indo-Pakistani dispute will turn violent and that the violence will escalate to war irrespective of the presence of nuclear weapons.

### A2: Links to Case

**Turns the k**

**McClean ‘1**

[David. Society for the Advancement of American Philosophy. “The Cultural Left and the Limits of Social Hope” [www.americanphilosophy.org/archives/2001%2520Conference/Discussion%2520papers/david\_mcclean.htm+foucault+habermas+slapped+cud&hl=en&gl=us&ct=clnk&cd=1](http://www.americanphilosophy.org/archives/2001%2520Conference/Discussion%2520papers/david_mcclean.htm+foucault+habermas+slapped+cud&hl=en&gl=us&ct=clnk&cd=1) 2001]

Yet for some reason, at least partially explicated in Richard Rorty's Achieving Our Country, a book that I think is long overdue, leftist critics continue to cite and refer to the eccentric and often a priori ruminations of people like those just mentioned, and a litany of others including Derrida, Deleuze, Lyotard, Jameson, and Lacan, who are to me hugely more irrelevant than Habermas in their narrative attempts to suggest policy prescriptions (when they actually do suggest them) aimed at curing the ills of homelessness, poverty, market greed, national belligerence and racism. I would like to suggest that it is time for American social critics who are enamored with this group, those who actually want to be relevant, to recognize that they have a disease, and a disease regarding which I myself must remember to stay faithful to my own twelve step program of recovery. The disease is the need for elaborate theoretical "remedies" wrapped in neological and multi-syllabic jargon. These elaborate theoretical remedies are more "interesting," to be sure, than the pragmatically settled questions about what shape democracy should take in various contexts, or whether private property should be protected by the state, or regarding our basic human nature (described, if not defined (heaven forbid!), in such statements as "We don't like to starve" and "We like to speak our minds without fear of death" and "We like to keep our children safe from poverty"). As Rorty puts it, "When one of today's academic leftists says that some topic has been 'inadequately theorized,' you can be pretty certain that he or she is going to drag in either philosophy of language, or Lacanian psychoanalysis, or some neo-Marxist version of economic determinism. . . . These futile attempts to philosophize one's way into political relevance are a symptom of what happens when a Left retreats from activism and adopts a spectatorial approach to the problems of its country. Disengagement from practice produces theoretical hallucinations"(italics mine).[(1)](file:///E:\WINDOWS\Temporary%20Internet%20Files\Content.IE5\OTKXU3YH\the%20city.htm#N_1_) Or as John Dewey put it in his The Need for a Recovery of Philosophy, "I believe that philosophy in America will be lost between chewing a historical cud long since reduced to woody fiber, or an apologetics for lost causes, . . . . or a scholastic, schematic formalism, unless it can somehow bring to consciousness America's own needs and its own implicit principle of successful action." Those who suffer or have suffered from this disease Rorty refers to as the Cultural Left, which left is juxtaposed to the Political Left that Rorty prefers and prefers for good reason. Another attribute of the Cultural Left is that its members fancy themselves pure culture critics who view the successes of America and the West, rather than some of the barbarous methods for achieving those successes, as mostly evil, and who view anything like national pride as equally evil even when that pride is tempered with the knowledge and admission of the nation's shortcomings. In other words, the Cultural Left, in this country, too often dismiss American society as beyond reform and redemption. And Rorty correctly argues that this is a disastrous conclusion, i.e. disastrous for the Cultural Left. I think it may also be disastrous for our social hopes, as I will explain. Leftist American culture critics might put their considerable talents to better use if they bury some of their cynicism about America's social and political prospects and help forge public and political possibilities in a spirit of determination to, indeed, achieve our country - the country of Jefferson and King; the country of John Dewey and Malcom X; the country of Franklin Roosevelt and Bayard Rustin, and of the later George Wallace and the later Barry Goldwater. To invoke the words of King, and with reference to the American society, the time is always ripe to seize the opportunity to help create the "beloved community," one woven with the thread of agape into a conceptually single yet diverse tapestry that shoots for nothing less than a true intra-American cosmopolitan ethos, one wherein both same sex unions and faith-based initiatives will be able to be part of the same social reality, one wherein business interests and the university are not seen as belonging to two separate galaxies but as part of the same answer to the threat of social and ethical nihilism. We who fancy ourselves philosophers would do well to create from within ourselves and from within our ranks a new kind of public intellectual who has both a hungry theoretical mind and who is yet capable of seeing the need to move past high theory to other important questions that are less bedazzling and "interesting" but more important to the prospect of our flourishing - questions such as "How is it possible to develop a citizenry that cherishes a certain hexis, one which prizes the character of the Samaritan on the road to Jericho almost more than any other?" or "How can we square the political dogma that undergirds the fantasy of a missile defense system with the need to treat America as but one member in a community of nations under a "law of peoples?"The new public philosopher might seek to understand labor law and military and trade theory and doctrine as much as theories of surplus value; the logic of international markets and trade agreements as much as critiques of commodification, and the politics of complexity as much as the politics of power (all of which can still be done from our arm chairs.) This means going down deep into the guts of our quotidian social institutions, into the grimy pragmatic details where intellectuals are loathe to dwell but where the officers and bureaucrats of those institutions take difficult and often unpleasant, imperfect decisions that affect other peoples' lives, and it means making honest attempts to truly understand how those institutions actually function in the actual world before howling for their overthrow commences. This might help keep us from **being slapped down in debates by true policy pros who actually know what they are talking about** but who lack awareness of the dogmatic assumptions from which they proceed, and who have not yet found a good reason to listen to jargon-riddled lectures from philosophers and culture critics with their snobish disrespect for the so-called "managerial class."

### Snap Shot

#### GOP’s on board BECAUSE OF political capital

Dionne 2-6 (EJ, Columnist – Washington Post, “GOP Will Back Immigration Reform,” 2013, <http://www.goerie.com/article/20130206/OPINION09/302069992/EJ-Dionne%3A-GOP-will-back-immigration-reform>)

That's the comparison to keep in mind to understand the extraordinary transformation of Beltway politics on immigration reform. Until Obama was re-elected, party competition translated into Republican efforts to block virtually everything the president wanted to accomplish. On immigration, at least, the parties are now competing to share credit for doing something big. It's wonderful to behold. Republicans who always held views on immigration similar to the president's -- notably Sen. John McCain -- are now free to say so. Other Republicans who thought a hard line on the issue was a political winner have been forced by the electoral facts to change their minds. Democrats, aware of how important Latino votes are to their party's future, are determined to get immigration reform done. Nothing is certain in Washington, especially in the Republican-led House of Representatives, but the odds that we will finally fix a broken immigration system are very high. The behind-the-scenes wrangling over the choreography of last week's twin immigration announcements -- by a bipartisan group of senators and by the president in a speech in Nevada -- shows how strong the bias toward action has become. We've become so accustomed to the politics of obstruction that we forget there is still such a thing as legislative craftsmanship. The Jan. 25 proposal by eight senators of their ideas for reform was months in the making as Sens. Charles Schumer, D-N.Y., and Lindsey Graham, R-S.C., worked closely with their colleagues to prepare for this moment. But Obama felt compelled to make clear early on that immigration reform was one of his highest priorities. The Senate negotiators worried that if Obama got out front with positions more progressive than theirs, particularly on a speedier path to citizenship for illegal immigrants, he could foil their efforts to reach accord. This fear reflected the GOP's Obama-can't-win response to whatever he does. Until now, Republicans criticized him for not taking "leadership" in pushing for immigration reform. But as soon as he was ready to speak out, the GOP switched direction, warning that his leadership was the last thing they wanted -- and could get in the way of a compromise. Thus did House Speaker John Boehner use a spokesman to instruct Obama to be "careful not to drag the debate to the left and ultimately disrupt the difficult work that is ahead in the House and Senate." As it happened, by letting it be known that he planned to give an immigration speech, Obama sped up the timetable of the Senate group, said a House Democrat active on the issue, and even encouraged a small collection of House Republicans eager for reform to let it be known that they, too, were working toward compromise. Obama sought to thread the political needle by laying out his principles while holding off on proposing a bill of his own. He would send up legislation only "if Congress is unable to move forward in a timely fashion." A relieved Schumer, using words almost never heard in Washington, declared that the president "is handling this perfectly." There will be much posturing over the next several months. By going slightly to the progressive side of the senators, Obama may ease the way for Republicans to strike a deal since they will be able to claim they stayed to the president's right. Conservative supporters of reform, such as Sen. Marco Rubio of Florida, will keep saying critical things about the president to preserve their credibility with the right. And if Boehner is interested in reform, he, too, must play a delicate game of distancing himself from Obama to persuade his most conservative colleagues to acquiesce to a vote on a bill. But make no mistake: This is immigration reform's time. It was poignant to hear McCain state plainly and eloquently what he has always felt. "We have been too content for too long," he said, "to allow individuals to mow our lawn, serve our food, clean our homes and even watch our children, while not affording them any of the benefits that make our country so great." Thanks to an election, those words are no longer politically incorrect inside John McCain's party.

### Opp Cost

**Any interpretation of fiat that moots the politics DA isn’t real world – you should reject it – kills all DA links based off international response, political process, and funding – those are key to neg ground, promote in-depth and timely research, and increase education on current events. And there’s no brightline to what’s intrinsic, meaning the aff can create ways to spike out of every DA – that’s a voting issue, the aff destroys neg ground**

**And, our link evidence proves germanity to the plan – it’s a necessary outcome**

**And, you can’t vote aff on this – the plan proves the resolution is a good idea, the permutation proves the resolution alone is insufficient**

**Politics tests a key opportunity cost**

**Saideman 11**. [Steve, associate professor of political science - McGill University, “Key Constraint on Policy Relevance,” 7/25 -- http://duckofminerva.blogspot.com/2011/07/key-constraint-on-policy-relevance.html]

Dan Drezner has a great post today about how the foreign policy smart set (his phrase) gets so frustrated by domestic politics that they tend to recommend domestic political changes that are never going to happen. I would go one step further and suggest that one of the key problems for scholars who want to be relevant for policy debates is that we tend to make recommendations that are "incentive incompatible." I love that phrase. What is best for policy may not be what is best for politics, and so we may think we have a good idea about what to recommend but get frustrated when our ideas do not get that far. Lots of folks talking about early warning about genocide, intervention into civil wars and the like blame "political will." That countries lack, for whatever reason, the compulsion to act. Well, that is another way of saying that domestic politics matters, but we don't want to think about it. Dan's piece contains an implication which is often false--that IR folks have little grasp of domestic politics. Many IR folks do tend to ignore or simplify the domestic side too much, but there is plenty of scholarship on the domestic determinants of foreign policy/grand strategy/war/trade/etc. Plenty of folks look at how domestic institutions and dynamics can cause countries to engage in sub-optimal foreign policies (hence the tradeoff implied in my second book--For Kin or Country). The challenge, then, is to figure out what would be a cool policy and how that cool policy could **resonate** with those who are **relevant domestically**. That is not easy, but **it is what is necessary**. To be policy relevant requires both parts--articulating a policy alternative that would improve things and some thought about how the alternative could be politically appealing. Otherwise, we can just dream about the right policy and gnash our teeth when it never happens.

# Rd 4 vs. Weber St (Thorium)

## 1NC

### 1NC

#### Immigration reform will pass, but capital’s key

NYT 1/31

[New York Times, 1/31/12, http://www.nytimes.com/2013/02/01/us/politics/senators-look-at-07-failure-for-lessons-on-immigration.html?\_r=0]

As eight senators in a bipartisan group look ahead to a broad immigration overhaul, they are also looking back to 2006 and 2007 — the last time a major immigration measure was considered — as something of a reverse playbook. Lesson 1? “Make sure you get out there and define what you’re trying to do,” said former Senator Trent Lott, the Mississippi Republican who, in 2007, was the minority whip when his chamber’s immigration efforts imploded. “Don’t forget to pay attention to the message, and don’t let the media define what you’re trying to do.” It is a tip that Mr. Lott says he has communicated to the staff of Senator Marco Rubio, a Florida Republican involved in the current effort, and so far Mr. Rubio seems to be heeding the advice. In recent weeks, he has focused on conservative media powerhouses, tirelessly wooing influential voices on the right like Bill O’Reilly and Rush Limbaugh. “The outreach by Marco Rubio has been very positive,” Mr. Lott said. “He’s very good at explaining what he wants to do.” Getting out ahead by articulating their immigration principles, as the group did in a Monday news conference, is only one of the ways the senators hope to learn from the mistakes of the past. This time, they said, they are capitalizing on a promising political environment, using more conciliatory language, and trying to harness media outlets to their advantage. They also plan to move their legislation through the Judiciary Committee, a step not taken in 2007 and one that helped doom the bill, and are working more closely **with businesses and labor unions** to make sure the two can also reach a compromise. “Our timing is right,” said Richard J. Durbin of Illinois, the No. 2 Democrat in the Senate. “The election results are still fresh in the minds of my Republican colleagues and they don’t want to go through this again.” President George W. Bush said in 2009 that it was “a mistake” to have pushed for changes to Social Security, rather than immigration, immediately after the 2004 election. By the time he took on immigration late in his second term, he was a lame duck president, weakened by the war in Iraq and facing dissent within his party. “By his own admission, President Bush made a strategic error in not pushing the issue right after his re-election,” said Kevin Appleby, the director of migration policy at the United States Conference of Catholic Bishops. “President Obama is not making the same mistake. He still has a lot of political capital to spend.” In the wake of the 2012 presidential election, where Mr. Obama’s defeat of Mitt Romney came with the help of 71 percent of the Hispanic vote, **those on all sides** of the immigration effort believe the climate is ripe for another attempt. And, at least in the early stages, they are taking steps to reach across the aisle, even with the words they choose. “The most important lesson I took way from 2006 and 2007 is that people had no faith that there wouldn’t be future waves of illegal immigrants,” said Senator Charles E. Schumer, a Democrat of New York in the Senate’s bipartisan immigration group. To show that he is serious about an overhaul, he explained, he is especially conscious of the language he uses; Mr. Schumer now refers to “illegal immigrants,” a term preferred by the right and an acknowledgment that the 11 million illegal immigrants currently in the country did, in fact, break the law. In a similar linguistic concession, Mr. Rubio, during Monday’s immigration news conference, referred to the “undocumented” workers, a term generally preferred by Democrats and loathed by his party’s conservative wing. In 2007, in an attempt to save time and reach a deal, the Senate bypassed the Judiciary Committee and brought the legislation straight to the floor. At the time, the senators who drafted the bill tried to band together to vote down any amendments that changed the substance of their compromise, an agreement that broke down. Several controversial amendments, including one that then-Senator Obama supported, ultimately led to the bill’s collapse. “What we’re doing now is we’re going to put it through committee,” Mr. Schumer said. “When the bill gets through committee, it will be battle-tested and we will be prepared for the floor in a better way.” The group is also considering again trying to maintain **a large voting bloc**, to squash any amendments they believe could kill their bill. “I think we have to unless there’s something that we both agree to,” Senator John McCain, Republican of Arizona, said when asked about such a possibility at an immigration panel on Wednesday. “It’s going to be fragile, as these kinds of things are, and so we will have to take some tough votes in order to keep it intact.”

#### Thorium causes massive backlash

Niiler 12 Eric is a health and science writer at the Washington Post. “Nuclear power entrepreneurs push thorium as a fuel,” Feb 20, http://www.washingtonpost.com/national/health-science/nuclear-power-entrepreneurs-push-thorium-as-a-fuel/2011/12/15/gIQALTinPR\_story.html?wprss=rss\_national

Although the idea of thorium power has been around for decades — and some countries are planning to build thorium-powered plants — it has not caught on with the companies that design and build nuclear plants in the United States or with the national research labs charged with investigating future energy sources.¶ **“There are small boatloads of fanatics on thorium that don’t see the downsides**,” said Dan Ingersoll, senior project manager for nuclear technology at the Oak Ridge National Laboratory in Tennessee. For one thing, he said, it would betoo expensive to replace or convert the nuclear power plants already running in this country: “A thorium-based fuel cycle has some advantages, but **it’s not compelling for infrastructure and investments.”**¶ He also pointed out that thorium would still have some radioactive byproducts — just not as much as uranium and not as long-lived — and that there is no ready stockpile of thorium in the United States. It would have to be mined.¶ Overall, he says the benefits don’t outweigh the huge costs of switching technologies. “I’m looking for something compelling enough to trash **billions of dollars of infrastructure** that we have already and I don’t see that.”¶ Thorium advocates such as Kirk Sorensen, a former NASA engineer who is now chief executive of Huntsville, Ala.-based Flibe Energy, are not deterred.¶ “We recognize this is a new and different technology, and developing it is significantly different from the existing nuclear industry,” Sorensen said. “Part of **the problem is that nuclear only means one thing in the** public and **[U.S.] government’s mind.”**¶ Thorium exists in the ground as thorium oxide and is three to four times as abundant worldwide as uranium, according to a 2005 report from the International Atomic Energy Agency. Thorium is less radioactive than uranium, and it emits alpha particles, which are less biologically harmful than uranium’s gamma particles. That makes thorium easier to store safely.¶ With an extremely high melting point (over 6,000 degrees), thorium has been used in portable gas lanterns, high-temperature ceramic products and aerospace applications. But because of its radioactivity and the development of alternative materials, most uses of the element were phased out.¶ Once a working experiment¶ Half a century ago, however, the United States was taking a serious look at thorium as a nuclear fuel. It was used at a molten-salt reactor that government scientists built and ran from 1965 to 1969 at Oak Ridge.¶ But after India detonated a nuclear bomb in 1974 with plutonium extracted from a reactor designed for non-weapons use, fears of proliferation convinced successive U.S. administrations to cut back on experimental nuclear programs. The thorium-fuel project was mostly forgotten. Instead, all subsequent nuclear plants were designed to use uranium, the fuel that powers all 104 reactors operating in the United States today.¶ Almost all the U.S. plants are at least 25 years old; some are approaching 50. With the federal government unable to come up with a permanent waste disposal site, spent fuel rods — which remain radioactive for thousands of years — are piling up at each reactor site.¶ Nevertheless, utilities have been preparing to build 20 to 30 similar reactors to replace the older ones. (Earlier this month, the Nuclear Regulatory Commission approved Atlanta-based Southern Co.’s proposal to build two such reactors in Georgia. )¶ For the past few years, Sorensen has been trying to convince them to build LFTRs instead. He posts technical documents from the Oak Ridge thorium reactor on his blog, Energy from Thorium. Last year, he left his day job at Teledyne Brown Engineering to start Flibe, the name of which is derived from the mixture of fluoride, lithium and beryllium salts used in a LFTR.¶ “We can look back to Oak Ridge,” he says, to “rebuild the capability that existed in 1974.”¶ Sorensen says a LFTR using a mixture of thorium as a fuel plus either uranium or plutonium to kick-start the reaction could produce higher core temperatures at lower pressures than steam reactors, meaning it would not need as many safety and cooling systems.¶ Even better, he says, LFTRs could be configured to consume the spent fuel that is sitting around the country at nuclear sites.¶ Other entrepreneurs are taking a different tack. McLean-based Lightbridge wants to mix thorium and uranium to slightly boost the output of existing nuclear plants. Lightbridge is helping the Russian government build such a program, said Seth Grae, the company’s president and chief executive.¶ But most U.S. nuclear energy industry executives are wary of both approaches to thorium, saying that neither utilities nor investors are eager to gamble on an unfamiliar technology.

#### Immigration reform expands skilled labor --- spurs economic growth in China and India.

Los Angeles **Times**, 11/9/**2012** (Other countries eagerly await U.S. immigration reform, p. http://latimesblogs.latimes.com/world\_now/2012/11/us-immigration-reform-eagerly-awaited-by-source-countries.html)

"Comprehensive immigration reform will see expansion of skilled labor visas," predicted B. Lindsay Lowell, director of policy studies for the Institute for the Study of International Migration at Georgetown University. A former research chief for the congressionally appointed Commission on Immigration Reform, Lowell said he expects to see at least a fivefold increase in the number of highly skilled labor visas that would provide "a significant shot in the arm for India and China." There is widespread consensus among economists and academics that skilled migration fosters new trade and business relationships between countries and enhances links to the global economy, Lowell said. "Countries like India and China weigh the opportunities of business abroad from their expats with the possibility of brain drain, and I think they still see the immigration opportunity as a bigger plus than not," he said.

#### Nuclear war

Bouton 10 (Marshall M., President – Chicago Council on Global Affairs, “America’s Interests in India”, CNAS Working Paper, October, <http://www.cnas.org/files/documents/publications/CNAS_USInterestsinIndia_> Bouton.pdf)

In South Asia, the most immediately compelling U.S. interest is preventing terrorist attacks on the U.S. homeland originating in or facilitated by actors in South Asia, particularly in Afghanistan and Pakistan. To avert that possibility, the United States also has an interest in the stability and development of both countries. At the same time, the United States has a vital interest in preventing conflict between Pakistan and India, immediately because such a conflict would do great damage to U.S. efforts in Afghanistan and Pakistan (such as the diversion of Pakistani military attention away from the insurgency) and because it would pose the severe risk of nuclear escalation. Finally, the United States has an interest in peace and stability in South Asia as a whole. Instability and violence in nearly every one of India’s neighbors, not to mention in India itself, could, if unchecked, undermine economic and political progress, potentially destabilizing the entire region. At present, a South Asia dominated by a politically stable and economically dynamic India is a hugely important counterweight to the prevalent instability and conflict all around India’s periphery. Imagining the counterfactual scenario, a South Asian region, including India, that is failing economically and stumbling politically, is to imagine instability on a scale that would have global consequences, including damage to the global economy, huge dislocations of people and humanitarian crisis, increasing extremism and terrorism, and much greater potential for unchecked interstate and civil conflict.

### 1NC

#### Electricity prices are declining

**Burtraw 8/21/12** (one of the nation’s foremost experts on environmental regulation in the electricity sector “Falling Emissions and Falling Prices: Expectations for the Domestic Natural Gas Boom” http://common–resources.org/2012/falling–emissions–and–falling–prices–expectations–for–the–domestic–natural–gas–boom/)

Moreover, the boom in domestic natural gas production could have even more immediate affects for U.S. electricity consumers. The increased supply of gas is expected to lower natural gas prices and retail electricity prices over the next 20 years, according to a [new RFF Issue Brief](http://www.rff.org/Publications/Pages/PublicationDetails.aspx?PublicationID=22019). These price decreases are expected to be even larger if demand for electricity continues on a slow–growth trajectory brought on by the economic downturn and the increased use of energy efficiency.For example, RFF analysis found that delivered natural gas prices would have been almost 35% higher in 2020 if natural gas supply projections had matched the lower estimates released by the U.S. Energy Information Administration (EIA) in 2009. Instead, with an increased gas supply, consumers can expect to pay $4.9 per MMBtu for delivered natural gas in 2020 instead of $6.6 per MMBtu. These trends are even more exaggerated if demand for electricity were to increase to levels projected by the EIA just three years ago, in 2009.This decrease in natural gas prices is expected to translate into a decrease in retail electricity prices for most electricity customers in most years out to 2020. Compared to the world with the lower gas supply projections, average national electricity prices are expected to be almost 6% lower, falling from 9.25 cents to 8.75 cents per kilowatt–hour in 2020. Residential, commercial, and industrial customers are all expected to see a price decrease, with the largest price changes occurring in parts of the country that have competitive electricity markets. All of these prices decreases translate into real savings for most electricity customers. The savings are largest for commercial customers, who stand to save $33.9 Billion (real $2009) under the new gas supply projections in 2020. Residential customers also stand to save big, with estimates of $25.8 Billion (real $2009) in savings projected for 2020.

#### Plan raises prices

Cooper 9 (Mark, SENIOR FELLOW FOR ECONOMIC ANALYSIS INSTITUTE FOR ENERGY AND THE ENVIRONMENT VERMONT LAW SCHOOL, "THE ECONOMICS OF NUCLEAR REACTORS: RENAISSANCE OR RELAPSE?," http://www.vermontlaw.edu/Documents/Cooper%20Report%20on%20Nuclear%20Economics%20FINAL%5B1%5D.pdf)

Within the past year, estimates of the cost of nuclear power from a new generation of reactors have ranged from a low of 8.4 cents per kilowatt hour (kWh) to a high of 30 cents. This paper tackles the debate over the cost of building new nuclear reactors, with the key findings as follows: • The initial cost projections put out early in today’s so–called “nuclear renaissance” were about one–third of what one would have expected, based on the nuclear reactors completed in the 1990s. • The most recent cost projections for new nuclear reactors are, on average, over four times as high as the initial “nuclear renaissance” projections. • There are numerous options available to meet the need for electricity in a carbon–constrained environment that are superior to building nuclear reactors. Indeed, nuclear reactors are the worst option from the point of view of the consumer and society. • The low carbon sources that are less costly than nuclear include efficiency, cogeneration, biomass, geothermal, wind, solar thermal and natural gas. Solar photovoltaics that are presently more costly than nuclear reactors are projected to decline dramatically in price in the next decade. Fossil fuels with carbon capture and storage, which are not presently available, are projected to be somewhat more costly than nuclear reactors. • Numerous studies by Wall Street and independent energy analysts estimate efficiency and renewable costs at an average of 6 cents per kilowatt hour, while the cost of electricity from nuclear reactors is estimated in the range of 12 to 20 cents per kWh. • The additional cost of building 100 new nuclear reactors, instead of pursuing a least cost efficiency–renewable strategy, would be in the range of $1.9–$4.4 trillion over the life the reactors. Whether the burden falls on ratepayers (in electricity bills) or taxpayers (in large subsidies), incurring excess costs of that magnitude would be a substantial burden on the national economy and add immensely to the cost of electricity and the cost of reducing carbon emissions.

#### K2 Econ

Perry 12 (Mark, Prof of Economics @ Univ. of Michigan, "America's Energy Jackpot: Industrial Natural Gas Prices Fall to the Lowest Level in Recent History," http://mjperry.blogspot.com/2012/07/americas–energy–jackpot–industrial.html)

Building petrochemical plants could suddenly become attractive in the United States. Manufacturers will "reshore" production to take advantage of low natural gas and electricity prices. Energy costs will be lower for a long time, giving a competitive advantage to companies that invest in America, and also helping American consumers who get hit hard when energy prices spike. After years of bad economic news, the natural gas windfall is very good news. Let's make the most of it." The falling natural gas prices also make the predictions in this December 2011 study by PriceWaterhouseCoopers, "Shale gas: A renaissance in US manufacturing?"all the more likely: U.S. manufacturing companies (chemicals, metals and industrial) could employ approximately one million more workers by 2025 because of abundant, low–priced natural gas. Lower feedstock and energy cost could help U.S. manufacturers reduce natural gas expenses by as much as $11.6 billion annually through 2025. MP: As I have emphasized lately, America's ongoing shale–based energy revolution is one of the real bright spots in an otherwise somewhat gloomy economy, and provides one of the best reasons to be bullish about America's future. The shale revolution is creating thousands of well–paying, shovel–ready jobs in Texas, North Dakota and Ohio, and thousands of indirect jobs in industries that support the shale boom (sand, drilling equipment, transportation, infrastructure, steel pipe, restaurants, etc.). In addition, the abundant shale gas is driving down energy prices for industrial, commercial, residential and electricity–generating users, which frees up billions of dollars that can be spent on other goods and services throughout the economy, providing an energy–based stimulus to the economy. Cheap natural gas is also translating into cheaper electricity rates, as low–cost natural gas displaces coal. Further, cheap and abundant natural gas is sparking a manufacturing renaissance in energy–intensive industries like chemicals, fertilizers, and steel. And unlike renewable energies like solar and wind, the natural gas boom is happening without any taxpayer–funded grants, subsidies, credits and loans. Finally, we get an environmental bonus of lower CO2 emissions as natural gas replaces coal for electricity generation. Sure seems like a win, win, win, win situation to me.

#### Nuclear war and turns warming

O’Hanlon 12 — Kenneth G. Lieberthal, Director of the John L. Thornton China Center and Senior Fellow in Foreign Policy and Global Economy and Development at the Brookings Institution, former Professor at the University of Michigan, served as special assistant to the president for national security affairs and senior director for Asia on the National Security Council, holds a Ph.D. from Columbia University, and Michael E. O'Hanlon, Director of Research and Senior Fellow in Foreign Policy at the Brookings Institution, Visiting Lecturer at Princeton University, Adjunct Professor at Johns Hopkins University, holds a Ph.D. from Princeton University, 2012 (“The Real National Security Threat: America's Debt,” *Los Angeles Times*, July 10th, Available Online at http://www.brookings.edu/research/opinions/2012/07/10-economy-foreign-policy-lieberthal-ohanlon, Accessed 07-12-2012)

Lastly, American economic weakness undercuts U.S. leadership abroad. Other countries **sense our weakness** and wonder about our purported decline. If this perception becomes more widespread, and the case that we are in decline becomes more persuasive, countries will begin to **take actions that reflect their skepticism about America's future**. Allies and friends will **doubt our commitment** and may **pursue** nuclear weapons for their own security, for example; adversaries will **sense opportunity** and be **less restrained in throwing around their weight** in their own neighborhoods. The crucial Persian Gulf and Western Pacific regions will likely become **less stable**. Major war will become more likely. When running for president last time, Obama eloquently articulated big foreign policy visions: healing America's breach with the Muslim world, controlling global **climate change**, dramatically curbing **global poverty** through development aid, moving toward a world free of **nuclear weapons**. These were, and remain, worthy if elusive goals. However, for Obama or his successor, there is now **a much more urgent big-picture issue: restoring U.S.** economic strength**. Nothing else is really possible if that fundamental prerequisite to effective foreign policy is not reestablished**.

### 1NC

#### Energy security militarizes energy – justifies intervention and causes serial policy failure

Ciuta 10 -- Lecturer in International Relations and Director of the Centre of European Politics, School of Slavonic and East European Studies @ University College London, UK (Felix, 2010, "Conceptual Notes on Energy Security: Total or Banal Security?" Security Dialogue 41(123), Sage)

Even casual observers will be familiar with the argument that energy is a security issue because it is either a cause or an instrument of war or conflict. Two different strands converge in this logic of energy security. The first strand focuses on energy as an instrument: energy is what states fight their current wars with. We can find here arguments regarding the use of the ‘energy weapon’ by supplier states (Belkin, 2007: 4; Lugar, 2006: 3; Winstone, Bolton & Gore, 2007: 1; Yergin, 2006a: 75); direct substitutions in which energy is viewed as the ‘equivalent of nuclear weapons’ (Morse & Richard, 2002: 2); and rhetorical associations that establish policy associations, as exemplified by the panel ‘Guns and Gas’ during the Transatlantic Conference of the Bucharest NATO Summit. The second strand comes from the literature on resource wars, defined as ‘hot conflicts triggered by a struggle to grab valuable resources’ (Victor, 2007: 1). Energy is seen as a primary cause of greatpower conflicts over scarce energy resources (Hamon & Dupuy, 2008; Klare, 2001, 2008). Alternatively, energy is seen as a secondary cause of conflict; here, research has focused on the dynamics through which resource scarcity in general and energy scarcity in particular generate socio-economic, political and environmental conditions such as population movements, internal strife, secessionism and desertification, which cause or accelerate both interstate and intrastate conflict (Homer-Dixon, 1991, 1994, 2008; Solana, 2008; see also Dalby, 2004). As is immediately apparent, this logic draws on a classic formulation that states that ‘a nation is secure to the extent to which it is not in danger of having to sacrifice core values, if it wishes to avoid war, and is able . . . to maintain them by victory in such a war’ (Lippmann, 1943: 51). The underlying principle of this security logic is survival: not only surviving war, but also a generalized quasi-Darwinian logic of survival that produces wars over energy that are fought with ‘energy weapons’. At work in this framing of the energy domain is therefore a definition of security as ‘the absence of threat to acquired values’ (Wolfers, 1952: 485), more recently reformulated as ‘survival in the face of existential threats’ (Buzan, Wæver & de Wilde, 1998: 27). The defining parameters of this traditional security logic are therefore: (1) an understanding of security focused on the use of force, war and conflict (Walt, 1991: 212; Freedman, 1998: 48); and (2) a focus on states as the subjects and objects of energy security. In the war logic, energy security is derivative of patterns of international politics – often captured under the label ‘geopolitics’ (Aalto & Westphal, 2007: 3) – that lend their supposedly perennial attributes to the domain of energy (Barnes, Jaffe & Morse, 2004; Jaffe & Manning, 1998). The struggle for energy is thus subsumed under the ‘normal’ competition for power, survival, land, valuable materials or markets (Leverett & Noël, 2007). A key effect of this logic is to ‘arrest’ issues usually not associated with war, and thus erase their distinctive characteristics. Even the significance of energy qua energy is abolished by the implacable grammar of conflict: energy becomes a resource like any other, which matters insofar as it affects the distribution of capabilities in the international system. As a result, a series of transpositions affect most of the issues ranked high on the energy security agenda. For example, in the European context, the problem is not necessarily energy (or, more precisely, gas, to avoid the typical reduction performed by such accounts). The problem lies in the ‘geopolitical interests’ of Russia and other supplier states, whose strength becomes inherently threatening (Burrows & Treverton, 2007; Horsley, 2006). Energy security policies become entirely euphemistic, as illustrated for example by statements that equate ‘avoiding energy isolation’ with ‘beating Russia’ (Baran, 2007). Such ‘geopolitical’ understanding of international politics also habituates a distinct vocabulary. Public documents, media reports and academic analyses of energy security are suffused with references to weapons, battles, attack, fear, ransom, blackmail, dominance, superpowers, victims and losers. It is therefore unsurprising that this logic is coterminous with the widely circulating narrative of the ‘new’ Cold War. This lexicon of conflict encourages modulations, reductions and transpositions in the meanings of both energy and security. This is evident at the most fundamental level, structuring encyclopaedic entries (Kohl, 2004) and key policy documents (White House, 2007), where energy security becomes oil security (security modulates energy into oil), which becomes oil geopolitics (oil modulates security into geopolitics). Once security is understood in the grammar of conflict, the complexity of energy is abolished and reduced to the possession of oilfields or gas pipelines. The effect of this modulation is to habituate the war logic of security, and also to create a hierarchy between the three constitutive dimensions of energy security (growth, sustenance and the environment). This hierarchy reflects and at the same time embeds the dominant effect of the war logic, which is the militarization of energy (Russell & Moran, 2008), an argument reminiscent of the debates surrounding the securitization of the environment (Deudney, 1990). It is of course debatable whether this is a new phenomenon. Talk of oil wars has been the subject of prestigious conferences and conspiracy theories alike, and makes the headlines of newspapers around the world. A significant literature has long focused on the relationship between US foreign policy, oil and war (Stokes, 2007; in contrast, see Nye, 1982). The pertinence of this argument cannot be evaluated in this short space, but it is worth noting that it too reduces energy to oil, and in/security to war. The key point is that this logic changes not only the vocabulary of energy security but also its political rationality. As Victor (2008: 9) puts it, this signals ‘the arrival of military planning to the problem of natural resources’ and inspires ‘a logic of hardening, securing and protecting’ in the entire domain of energy. There is, it must be underlined, some resistance to the pull of the logic of war, as attested for example by NATO’s insistence that its focus on energy security ‘will not trigger a classical military response’ (De Hoop Scheffer, 2008: 2). Yet, the same NATO official claims that ‘the global competition for energy and natural resources will re-define the relationship between security and economics’, which hints not only at the potential militarization of energy security policy but also at the hierarchies this will inevitably create. New geographies of insecurity will thus emerge if the relationship between the environment, sustenance and growth is structured by the militarized pursuit of energy (Campbell, 2005: 952; Christophe Paillard in Luft & Paillard, 2007).

**Enframing of national security is a pre-requisite to macropolitical violence**

**Burke 7** (Anthony, Senior Lecturer in Politics and International Relations at UNSW, Sydney, “Ontologies of War: Violence, Existence and Reason”, Theory and Event, 10.2, Muse)

My argument here, whilst normatively sympathetic to Kant's moral demand for the eventual abolition of war, militates against excessive optimism.86 Even as I am arguing that war is not an enduring historical or anthropological feature, or a neutral and rational instrument of policy -- that it is rather the **product of hegemonic forms of knowledge** about political action and community -- my analysis does suggest some sobering conclusions about its power as an idea and formation. Neither the progressive flow of history nor the pacific tendencies of an international society of republican states will save us. The violent ontologies I have described here in fact dominate the conceptual and policy frameworks of modern republican states and have come, against everything Kant hoped for, to stand in for progress, modernity and reason. Indeed what Heidegger argues, I think with some credibility, is that the enframing world view has come to stand in for being itself. Enframing, argues Heidegger, 'does not simply endanger man in his relationship to himself and to everything that is...it drives out every other possibility of revealing...the rule of Enframing threatens man with the possibility that it could be denied to him to enter into a more original revealing and hence to experience the call of a more primal truth.'87 What I take from Heidegger's argument -- one that I have sought to extend by analysing the militaristic power of modern ontologies of political existence and security -- is a view that the challenge is posed not merely by a few varieties of weapon, government, technology or policy, but by an overarching system of thinking and understanding that lays claim to our entire space of truth and existence. Many of the **most destructive features of contemporary modernity** -- militarism, repression, coercive diplomacy, covert intervention, geopolitics, economic exploitation and ecological destruction -- derive not merely from particular choices by policymakers based on their particular interests, but from calculative, 'empirical' discourses of scientific and political truth rooted in powerful enlightenment images of being. Confined within such an epistemological and cultural universe, **policymakers' choices become necessities**, their actions become inevitabilities, and humans suffer and die. Viewed in this light, 'rationality' is the name we give the chain of reasoning which builds one structure of truth on another until a course of action, however violent or dangerous, becomes preordained through that reasoning's very operation and existence. It creates both discursive constraints -- available choices may simply not be seen as credible or legitimate -- and material constraints that derive from the mutually reinforcing cascade of discourses and events which then preordain militarism and violence as necessary policy responses, however ineffective, dysfunctional or chaotic. The force of my own and Heidegger's analysis does, admittedly, tend towards a deterministic fatalism. On my part this is quite deliberate; it is important to allow this possible conclusion to weigh on us. Large sections of modern societies -- especially parts of the media, political leaderships and national security institutions -- are utterly trapped within the Clausewitzian paradigm, within the instrumental utilitarianism of 'enframing' and the stark ontology of the friend and enemy. They are certainly tremendously aggressive and energetic in continually stating and reinstating its force. But is there a way out? Is there no possibility of agency and choice? Is this not the key normative problem I raised at the outset, of how the modern ontologies of war efface agency, causality and responsibility from decision making; the responsibility that comes with having choices and making decisions, with exercising power? (In this I am much closer to Connolly than Foucault, in Connolly's insistence that, even in the face of the anonymous power of discourse to produce and limit subjects, selves remain capable of agency and thus incur responsibilities.88) There seems no point in following Heidegger in seeking a more 'primal truth' of being -- that is to reinstate ontology and obscure its worldly manifestations and consequences from critique. However we can, while refusing Heidegger's unworldly89 nostalgia, appreciate that he was searching for a way out of the modern system of calculation; that he was searching for a 'questioning', 'free relationship' to technology that would not be immediately recaptured by the strategic, calculating vision of enframing. Yet his path out is somewhat chimerical -- his faith in 'art' and the older Greek attitudes of 'responsibility and indebtedness' offer us valuable clues to the kind of sensibility needed, but little more. When we consider the problem of policy, the force of this analysis suggests that choice and agency can be all too often limited; they can remain confined (sometimes quite wilfully) within the overarching strategic and security paradigms. Or, more hopefully, policy choices could aim to bring into being a more enduringly inclusive, cosmopolitan and peaceful logic of the political. But this cannot be done without seizing alternatives from outside the space of enframing and utilitarian strategic thought, by being aware of its presence and weight and activating a very different concept of existence, security and action.90 This would seem to hinge upon 'questioning' as such -- on the questions we put to the real and our efforts to create and act into it. Do security and strategic policies seek to exploit and direct humans as material, as energy, or do they seek to protect and enlarge human dignity and autonomy? Do they seek to impose by force an unjust status quo (as in Palestine), or to remove one injustice only to replace it with others (the U.S. in Iraq or Afghanistan), or do so at an unacceptable human, economic, and environmental price? Do we see our actions within an instrumental, amoral framework (of 'interests') and a linear chain of causes and effects (the idea of force), or do we see them as folding into a complex interplay of languages, norms, events and consequences which are less predictable and controllable?91 And most fundamentally: Are we seeking to coerce or persuade? Are less violent and more sustainable choices available? Will our actions perpetuate or help to end the global rule of insecurity and violence? Will our thought?

**Altenative – reject the affirmative’s security discourse – only resistance can generate genuine political thought**

**Neoclous 8 –** Mark Neocleous, Prof. of Government @ Brunel, 2008 [Critique of Security, 185-6]

The only way out of such a dilemma, to escape the fetish, is perhaps **to eschew the logic of security altogether** - to reject it as so ideologically loaded in favour of the state that any real political thought other than the authoritarian and reactionary should be pressed to give it up. That is clearly something that can not be achieved within the limits of bourgeois thought and thus could never even begin to be imagined by the security intellectual. It is also something that the constant iteration of the refrain 'this is an insecure world' and reiteration of one fear, anxiety and insecurity after another will also make it hard to do. But it is something that the critique of security suggests we may have to consider if we want a political way out of the impasse of security. This impasse exists because security has now become so all-encompassing that it **marginalises all else, most notably** the constructive conflicts, **debates** and discussions **that animate political life.** The constant prioritising of a mythical security as a political end - as the political end constitutes a rejection of politics in any meaningful sense of the term. That is, as a mode of action in which differences can be articulated, in which the conflicts and struggles that arise from such differences can be fought for and negotiated, in which people might come to believe that another world is possible - that they might transform the world and in turn be transformed. Security politics simply removes this; worse, it remoeves it while purportedly addressing it. In so doing it suppresses all issues of power and turns political questions into debates about the most efficient way to achieve 'security', despite the fact that we are never quite told - never could be told - what might count as having achieved it. Security politics is, in this sense, an anti-politics,"' dominating political discourse in much the same manner as the security state tries to dominate human beings, reinforcing security fetishism and the monopolistic character of security on the political imagination. We therefore need to get beyond security politics, not add yet more 'sectors' to it in a way that simply expands the scope of the state and legitimises state intervention in yet more and more areas of our lives. Simon Dalby reports a personal communication with Michael Williams, co-editor of the important text Critical Security Studies, in which the latter asks: if you take away security, what do you put in the hole that's left behind? But I'm inclined to agree with Dalby: **maybe there is no hole**."' The mistake has been to think that there is a hole and that this hole needs to be filled with a new vision or revision of security in which it is re-mapped or civilised or gendered or humanised or expanded or whatever. All of these ultimately remain within the statist political imaginary, and consequently end up reaffirming the state as the terrain of modern politics, the grounds of security. The real task is not to fill the supposed hole with yet another vision of security, but to fight for an **alternative political language** which takes us beyond the narrow horizon of bourgeois security and which therefore does not constantly throw us into the arms of the state. That's the point of critical politics: to develop a new political language more adequate to the kind of society we want. Thus while much of what I have said here has been of a negative order, part of the tradition of critical theory is that the negative may be as significant as the positive in setting thought on new paths. For if security really is the supreme concept of bourgeois society and the fundamental thematic of liberalism, then to keep harping on about insecurity and to keep demanding 'more security' (while meekly hoping that this increased security doesn't damage our liberty) is to **blind ourselves** to the possibility of building real alternatives to the authoritarian tendencies in contemporary politics. To situate ourselves against security politics would allow us to circumvent the debilitating effect achieved through the constant securitising of social and political issues, debilitating in the sense that 'security' helps consolidate the power of the existing forms of social domination and justifies the short-circuiting of even the most democratic forms. It would also allow us to forge another kind of politics centred on a **different conception of the good.** We need a new way of thinking and talking about social being and politics that moves us beyond security. This would perhaps be emancipatory in the true sense of the word. What this might mean, precisely, must be open to debate. But it certainly requires recognising that security is an illusion that has forgotten it is an illusion; it requires recognising that security is not the same as solidarity; it requires accepting that insecurity is part of the human condition, and thus giving up the search for the certainty of security and instead learning to tolerate the uncertainties, ambiguities and 'insecurities' that come with being human; it requires accepting that 'securitizing' an issue does not mean dealing with it politically, but **bracketing it out** and handing it to the state; **it requires us to be brave enough to return the gift."'**

### 1NC

#### Text: The Department of Energy’s Office of Hearing and Appeals should grant regulatory waivers that exempt all parties from all restrictions to the formation of a thorium bank in the United States. The OHA should summarize the decision in an annual agency publication in the Federal Register.

#### The CP doesn’t reduce – “reductions” must be in quantity, not quality

**GEP 99** (Georgia Environmental Protection , http://www.air.dnr.state.ga.us/bank/forms/faqsheet.pdf)

The reductions **must be "quantifiable;"** i.e., the amount, rate and characteristics of the reduction must be measured or calculated through a reliable method and approved by the Environmental Protection Division;

#### The CP is a functionally different – it keeps the rule “on the books” and tailors it’s application – the plan creates a new rule – rulemaking is distinct from adjudication

Rossi 95 (Jim, Professor of Law – Vanderbilt University, “Making Policy through the Waiver of Regulations at the Federal Energy Regulatory Commission,” Administrative Law Review, 47 Admin. L. Rev. 260, Hein Online)

A. RULEMAKING VERSUS ADJUDICATION Two distinctive methodologies are available to agencies in formulating law and policy: **rulemaking and ad hoc adjudication**. As defined in the Administrative Procedure Act (APA), a rule is a statement of general applicability and future effect that implements, interprets, or prescribes **law or policy** or the organization, procedures, and standards for practice before an agency.95 Rules arise from formal or informal rulemaking proceedings before the issuing administrative agency. Rules create law in the form of statements that are binding on those persons or entities to whom they are addressed, regardless whether those persons or entities participated in the rulemaking proceeding that generated the rule. Rules generally bind the agency in future cases, although, as this article suggests, this is not always the case, nor should it be. An adjudicative order, on the other hand, is an agency statement of particular applicability determining the rights of, or applying law or policy to, specific individuals or entities on the basis of their special circumstances.96 Such orders generally arise as the result of an adjudicative proceeding involving persons who have asserted an interest sufficient to meet the agency's intervention standards.97 An individualized adjudicative proceeding allows the agency to tailor application of its law or policy to the specific time, place, and context of persons affected. An adjudicative order generally adopts principles or rules of law on an ad hoc basis as necessary to solve the specific case before the agency. The impact of adjudicative orders, however, is often broader than the specific case at hand because they may serve as precedent in similar future cases. As a general matter, most commentators have argued that agencies should adopt and elaborate law and policy by rulemaking rather than ad hoc adjudica- tion.98 By overlooking the particularities of time, place, and context, rules have the inherent values of predictability, stability, uniformity, and control. Yet, it is these very values about which adjudication is most skeptical. In addition to the inherent values of rules, rulemaking is generally regarded as a preferable decisionmaking methodology for several process-based reasons.99

#### OHA solves and avoids politics

Schuck 84 (Peter H., Professor of Law – Yale Law School, “Article: When the Exception Becomes the Rule: Regulatory Equity and the Formulation of Energy Policy through an Exceptions Process,” Duke Law Journal, April, 1984 Duke L.J. 163, Lexis)

Exceptions for hardship and unforeseen circumstances constitute the "bread and butter" of the DOE exceptions process, surely accounting for the vast majority of the OHA's decisions. n415 Such relief, which corresponds to Aman's "fairness" and "hardship" exceptions, n416 performs important safety valve functions. By reducing the hardships and the sense of injustice suffered by those to whom a rule applies, exceptions diminish the pressure to challenge the rule itself. But this equitable [\*284] safety valve function entails risks and problems. Judge Leventhal characterized one of them this way: Care must be taken that the rule be proved and not swallowed by the exception. . . . A safety valve is one thing, a dissipation of all force another. Care must also be taken lest [exceptions] be granted way-wardly and willy-nilly, justified by little more than the exigencies or protests of the day. n417 By all accounts, the OHA did not grant exceptions relief "willy-nilly." In its early years, the OHA applied what several observers described as a "tombstone" standard for relief; a firm could not hope for an exception unless it was on the verge of going out of business. Even later on, when the exigencies of the original crisis abated somewhat and the OHA seemed to relax its application of this standard, applicants were obliged to overcome a heavy presumption against relief. n418 Only during the motor gasoline shortages of 1978-1979 did the OHA seem to grant relief "at wholesale" as it were. When this occurred, Leventhal's warning proved prescient. n419 Just as the limits of rules, the hardships and aberrations they produce, represent only one set of reasons for which agencies seek regulatory equity, n420 so the need for equity is only the most obvious of the safety valve functions that the exceptions process performs. For example, the OHA has also provided DOE program administrators with safety valves of a political and bureaucratic nature, and these threaten administrative law values far more than the mere pursuit of equity in the application of rules. In the politically overheated atmosphere of energy policy during the 1970's, top energy officials found in the OHA the cooling breeze that they so desperately needed. "Leave it to Mel!" came to be the watchword of harried officials looking for a quick fix; it was a liberating device for policymakers who felt shackled by legal and political constraints. The roots of this strategy can be traced to Congress. From the beginning, Congress regarded a flexible exceptions process as a politically and programmatically essential component of a viable system of energy price and allocation controls. All of the legislation authorizing energy regulation, from the original Economic Stabilization Act through DOE Act, provided for the granting of discretionary exceptions. Indeed, it is possible, although difficult to demonstrate, that [\*285] these laws would never have been enacted had not such a process been provided. n421 To energy administrators, the exceptions process was equally essential. When congressional and industry complaints about the breadth, rigidity, and categorical nature of controversial energy regulations grew bitter, energy officials could often defuse this opposition by emphasizing that an exceptions process, capable of producing the desired flexibility, was available to handle any difficulties that might arise. As in Ashland, White House staff members or departmental leaders would sometimes urge powerful opponents of particular rules to apply for exceptions relief; indeed, they might even alert OHA Director Goldstein that applications would soon be forthcoming. When the OHA did grant an exception, as in Ashland, the opponents would no longer have to invest political capital in seeking changes in the rules themselves.

#### Annual publications avoids every solvency deficit

Rossi 95 (Jim, Professor of Law – Vanderbilt University, “Making Policy through the Waiver of Regulations at the Federal Energy Regulatory Commission,” Administrative Law Review, 47 Admin. L. Rev. 260, Hein Online)

Second, to the extent adjudicative waivers remain a primary vehicle for policymaking, FERC should summarize these proceedings in an **annual publication**. FERC's adjudicative waiver decisions, reported in the FERC reporters, are not systematically indexed in a manner that allows the public to observe how a particular regulation is applied.20' Annual summary and publication would make FERC's waivers more visible to **other regulators** in the executive branch (e.g., DOE, EPA, the White House), congressional oversight committees, regulated constituents, and the general public.22 Increased congressional oversight may lead to explicit statutory standards governing issuance of waivers, or to a statu- tory requirement that FERC use rulemaking to develop waiver standards.

### 1NC

**Restrictions mean direct governmental limitation**

**Viterbo 12** (Annamaria, Assistant Professor in International Law – University of Torino, PhD in International Economic Law – Bocconi University and Jean Monnet Fellow – European University Institute, International Economic Law and Monetary Measures: Limitations to States' Sovereignty and Dispute, p. 166)

In order to distinguish an exchange restriction from a trade measure, the Fund chose not to give relevance to the purposes or the effects of the measure and to adopt, instead, a technical criterion that focuses on the method followed to design said measure. An interpretation that considered the economic effects and purposes of the measures (taking into account the fact that the measure was introduced for balance of payments reasons or to preserve foreign currency reserves) would have inevitably extended the Fund's jurisdiction to trade restrictions, blurring the boundaries between the IMF and the GATT. The result of such a choice would have been that a quantitative restriction on imports imposed for balance of payments reasons would have fallen within the competence of the Fund. After lengthy discussions, in 1960 the IMF Executive Board adopted Decision No. 1034-(60/27).46 This Decision clarified that the distinctive feature of a restriction on payments and transfers for current international transactions is "whether it involves a **direct governmental limitation** on the availability or use of exchange as such\*.47 This is a limitation imposed directly on the use of currency in itself, for all purposes.

#### No restrictions in place – just requires Congressional approval

Kawa, 13 – writer for BusinessInsider (Lucas, 1/10. “Nuclear Byproducts Could Either Destroy The World Or Save It.” http://www.businessinsider.com/beneficial-thorium-byproducts-2013-1)

Kennedy has proposed the creation of a “Thorium Storage and Industrial Products Corporation” which would store the thorium obtained from monazite mines and find end-users for the product, specifically, as an energy source. This “Thorium Bank” would require Congressional approval (but not funding!), and would serve as a centralized headquarters for the mass proliferation of thorium energy in the United States.

**That’s a voting issue – allowing for aff’s that don’t directly reduce government limitations explode limits and detracts from education on actual on the book incentives**

### Solvency

Can’t solve - Won’t be competitive

Kawa, 12/19/12 – writer for BusinessInsider (Lucas, “There's One Big Obstacle To US Development Of Thorium.” http://www.businessinsider.com/how-natural-gas-is-crowding-out-thorium-2012-12)

Last week Norway joined India, China, and others in testing thorium, regarded by some as the energy source of the future. Gary Krellenstein is one of those people. This former JP Morgan Energy and Environment Director penned a report calling thorium “The Best, Most Overlooked Solution to Global Warming and Long-Term Energy Supply.” He’s quick to trumpet the benefits of thorium, especially compared to uranium (most of which we’ve discussed before) but also provides a perspective on some of thorium’s disadvantages, which include: High capital costs ($4000-$10,000/kW) Little existing infrastructure, no commercially operating plants Long lead times (estimated at over 10 years) and licensing issues The bad reputation of nuclear energy, due to meltdowns at Chernobyl and Fukushima But these aren’t the definitive factors that have prevented thorium’s proliferation – Krellenstein has a very direct answer for what’s keeping thorium on the sidelines: The natural gas revolution. Krellenstein claims that advances in fracking technology gives the U.S. another 100 years of domestic natural gas reserves, under current demand. Moreover, the price is expected to stay under $5/million cubic feet through 2022. His conclusion: Thorium power technology cannot economically compete with electricity generated by gas so long as NG prices remain in the $3-$6 per mmbtu price range. Simply, investors (who don't care about societal benefits of thorium) have to go for the best possible return on their principal. Krellenstein develops the argument that this means choosing natural gas – for now: Gas plants can be build more quickly and are cheaper than nuclear plants Natural gas has less harmful emissions than other fossil fuels Alternative energy sources are too expensive and unreliable He doesn’t see contamination caused by fracking as a threat to natural gas production, stating that it “appears to be a problem only where the shale is near the water aquifer, and there is no shortage of deep shale deposits.” But, in his opinion, there's only so long before we transition to thorium. Here's a list the preconditions Krellenstein thinks are necessary for thorium to thrive: Stricter regulations regarding greenhouse gases Tests which demonstrate its viability Investment grade credit ratings in order to finance the project Price guarantees from contractors Public knowledge of the benefits of thorium A stronger global economy

#### Thorium doesn’t solve the problems with nuclear

**Makhijani, 12** – president of the Institute for Energy and Environmental Research (Arjun, 5/4. “Is Thorium A Magic Bullet For Our Energy Problems?” Interview with Ira Flatow, Richard Martin. http://www.npr.org/2012/05/04/152026805/is-thorium-a-magic-bullet-for-our-energy-problems)

FLATOW: Not everyone sees thorium reactors as cheap, clean and safe alternatives, that - as a bet for the future. With me is Dr. Arjun Makhijani. He is president of the Institute for Energy and Environmental Research. He's here in our D.C. studios. Do you agree with Richard Martin that we missed out on thorium? If we had started out with thorium, would be in better shape now? ARJUN MAKHIJANI: I don't think so. I think the problems of nuclear power, fundamentally, would remain. The safety problems would be different. I mean, Mr. Martin and proponents of thorium are right in the sense that the liquid fuel reactor has a number of safety advantages, but it also has a number of disadvantages. For instance, this breeder reactor lost out with the sodium-cooled breeder, in the incident that Mr. Martin mentioned, because the liquid - the molten sodium reactor, the sodium-cooled reactor has a much better breeding ratio. It produces a lot more excess fuel that you can then take to the next reactor. In this reactor, because thorium is not a fissile material, you actually need either plutonium or enriched uranium to start it. In fact, this reactor that operated in Oak Ridge for a few years, it actually started up in 1964, it never used thorium to breed uranium-233. Some uranium-233 was put into the reactor at one point, but it had been made in another reactor. It hadn't been made in that reactor. It operated with enriched uranium, some plutonium and some uranium-233, but not made in that reactor. So what are the problems? The problem is that with this particular reactor, most people will want a reprocessing, that is separating the fissile material on-site. so you have a continuous flow of molten salt out of the reactor. You take out the protactinium-233, which is a precursor of uranium, and then you put the uranium back in the reactor, and then you keep it going. But if you look at the Princeton University paper on thorium reactors from a few years ago, you'll see that this onsite reprocessing allows you to separate protactinium altogether. Now, the U.S. wouldn't do it, but if you were a county without nuclear materials and had a reprocessing plant right there, you'd separate the protactinium-233, you'd get pure uranium-233, which is easier to make bombs with than plutonium. I can read you the quote from the Princeton University paper, but I won't bother. FLATOW: So you're saying that it doesn't solve the safety issues. MAKHIJANI: It doesn't solve the proliferation problem. It doesn't solve the waste problem, either. So every nuclear reactor, no matter what type, creates fission products, which are highly radioactive materials, some short-lived, some long-lived, to make energy. With the present reactors, we create about a ton per reactor, per year. If you have a more efficient reactor, at least you will create half a ton, probably eight-tenths of a ton, nine-tenths of a ton. This is highly radioactive waste. If you look at Oak Ridge's current evaluation, they say you have to condition this waste, you have to convert the fluorides, and then you have to have a deep geologic repository. What's in this waste? Cesium-137 and strontium-190, hundreds of years, just like today's reactors. Cesium-135 and iodine-129, millions of years half-life. Technetium-99, 200,000 years. Now, Mr. Martin says that you don't have to worry about Technetium-99 because it's used in medical practice on millions of people. Now, Technetium-99 is radioactive, and it's used not because it's risk-free, but because there's some need that balances off the risk according to the doctor, gives some benefit to the person. Technetium-99, like other radioactive materials, inside your body, creates a cancer risk. So you ask: Well, how much cancer risk does medical use of radiation in the United States create every year? If you use National Academy's coefficients for cancer risk, the answer would be about 90,000 cancers.

#### Minimum of 20 years before the aff solves

**Makhijani, 12** – president of the Institute for Energy and Environmental Research (Arjun, 5/4. “Is Thorium A Magic Bullet For Our Energy Problems?” Interview with Ira Flatow, Richard Martin. http://www.npr.org/2012/05/04/152026805/is-thorium-a-magic-bullet-for-our-energy-problems)

So we're talking about two different risks, here: the risks associated with an innovative form of nuclear power based on a very abundant and safe material versus the risk of a three-degree-Celsius, let's say, rise in global temperatures over the next 50 years, within, you know, my son's lifetime. So, as a society, I don't think we're very good at calculating risk. And so to hone in on these pretty technical issues of, well, there might be some proliferation risk with thorium, there's no question that thorium - liquid-fueled thorium reactors can be used to consume the existing waste from conventional reactors. It's unpressurized liquid chemistry. We are really good at that. And one thing we haven't mentioned yet is the whole issue of nuclear accidents. And so I'd like to dwell on that for a moment, as well.

FLATOW: Well, I've only got about a minute or so to go. But you brought it up, and let me get a reaction from Dr. Makhijani.

MARTIN: Of course.

MAKHIJANI: I have a favorite molten salt reactor. My reactor is free. It's in the sky, 93 million miles away. You can store its energy in molten salt. It is being done today. You can generate electricity for 24 hours a day. The - so the impermanency problem has been solved. I don't know why - I'm still trying to understand why photovoltaics are still so expensive in this country. But you know Germany - I was at a seminar yesterday at the Heinrich Boll Foundation about the Germany decision to get out of nuclear. They're going to have a completely renewable system maybe by the time thorium reactors become commercial. This isn't going to happen tomorrow, even if you pour money into it. It would take 10 years for the NRC to understand and write regulations for this thing. And it would take 10 years before that to build the reactors, do the experiments and produce the data so you can regulate this thing, because all of our regulation is based on light water reactors.

#### India proves solvency take outs

Makhijani and Boyd, 9 – president of the Institute for Energy and Environmental Research and Ph.D. in engineering; and Director of the Safe Energy Program at Physicians for Social Responsibility (Arjun and Michele, July. “Thorium Fuel: No Panacea for Nuclear Power,” A Fact Sheet Produced by the Institute for Energy and Environmental Research and Physicians for Social Responsibility)

Ongoing Technical Problems Research and development of thorium fuel has been undertaken in Germany, India, Japan, Russia, the UK, and the U.S. for more than half a century. Besides remote fuel fabrication and issues at the front end of the fuel cycle, thorium-U-233 breeder reactors produce fuel (“breed”) much more slowly than uranium-plutonium-239 breeders. This leads to technical complications. India is sometimes cited as the country that has successfully developed thorium fuel. In fact, India has been trying to develop a thorium breeder fuel cycle for decades but has not yet done so commercially. One reason reprocessing thorium fuel cycles haven’t been successful is that uranium-232 (U-232) is created along with uranium-233. U-232, which has a half-life of about 70 years, is extremely radioactive and is therefore very dangerous in small quantities: a single small particle in a lung would exceed legal radiation standards for the general public. U-232 also has highly radioactive decay products. Therefore, fabricating fuel with U-233 is very expensive and difficult.

### Warming

#### Warming is irreversible

ANI 10 (“IPCC has underestimated climate-change impacts, say scientists”, 3-20, One India, http://news.oneindia.in/2010/03/20/ipcchas-underestimated-climate-change-impacts-sayscientis.html)

According to Charles H. Greene, Cornell professor of Earth and atmospheric science, "Even if all man-made greenhouse gas emissions were stopped tomorrow and carbon-dioxide levels stabilized at today's concentration, by the end of this century, the global average temperature would increase by about 4.3 degrees Fahrenheit, or about 2.4 degrees centigrade above pre-industrial levels, which is significantly above the level which scientists and policy makers agree is a threshold for dangerous climate change." "Of course, greenhouse gas emissions will not stop tomorrow, so the actual temperature increase will likely be significantly larger, resulting in potentially catastrophic impacts to society unless other steps are taken to reduce the Earth's temperature," he added. "Furthermore, while the oceans have slowed the amount of warming we would otherwise have seen for the level of greenhouse gases in the atmosphere, the ocean's thermal inertia will also slow the cooling we experience once we finally reduce our greenhouse gas emissions," he said. This means that the temperature rise we see this century will be largely irreversible for the next thousand years. "Reducing greenhouse gas emissions alone is unlikely to mitigate the risks of dangerous climate change," said Green.

#### 1ac Cx proves they don’t transport the tech overseas-

**Means they can’t solve-China alt cause outweighs**

**Hale 11** (Thomas, PhD Candidate in the Department of Politics – Princeton University and a Visiting Fellow – LSE Global Governance, London School of Economics, “A Climate Coalition of the Willing,” Washington Quarterly, Winter, http://www.twq.com/11winter/docs/11winter\_Hale.pdf)

Intergovernmental efforts to limit the gases that cause climate change have all but failed. After the unsuccessful 2010 Copenhagen summit, and with little progress at the 2010 Cancun meeting, it is hard to see how major emitters will agree any time soon on mutual emissions reductions that are sufficiently ambitious to prevent a substantial (greater than two degree Celsius) increase in average global temperatures. It is not hard to see why. No deal excluding the United States and China, which together emit more than 40 percent of the world’s greenhouse gases (GHGs), is worth the paper it is written on. But domestic politics in both countries effectively block ‘‘G-2’’ leadership on climate. In the United States, the Obama administration has basically given up on national cap-and-trade legislation. Even the relatively modest Kerry-Lieberman-Graham energy bill remains dead in the Senate. The Chinese government, in turn, faces an even harsher constraint. Although the nation has adopted important energy efficiency goals, the Chinese Communist Party has staked its legitimacy and political survival on raising the living standard of average Chinese. Accepting international commitments that stand even a small chance of reducing the country’s GDP growth rate below a crucial threshold poses an unacceptable risk to the stability of the regime. Although the G-2 present the largest and most obvious barrier to a global treaty, they also provide a convenient excuse for other governments to avoid aggressive action. Therefore, the international community should not expect to negotiate a worthwhile successor to the Kyoto Protocol, at least not in the near future.

#### **No resource wars**

Pinker 11 (Steven, Harvard College Professor and Johnstone Family Professor in the Department of Psychology – Harvard University, “The Better Angels of Our Nature: Why Violence Has Declined,” Google Books)

Once again it seems to me that the appropriate response is "maybe, but maybe not." Though climate change can cause plenty of misery and deserves to be mitigated for that reason alone, it will not necessarily lead to armed conflict. The political scientists who track war and peace, such as Halvard Buhaug, Idean Salehyan, Ole Theisen, and Nils Gleditsch, are skeptical of the popular idea that people fight wars over scarce resources. Hunger and resource shortages are tragically common in sub-Saharn countries such as Malawi, Zambia, and Tanzania, **but wars involving them are not**. Hurricanes, floods, droughts, and tsunamis (such as the disastrous one in the Indian Ocean in 2004) do not generally lead to armed conflict. The American dust bowl in the 1930s, to take another example, caused plenty of deprivation but no civil war. And while temperatures have been rising steadily in Africa during the past fifteen years, civil wars and war deaths have been falling. Pressures on access to land and water can certainly cause local skirmishes, but a genuine war requires that hostile forces be organized and armed, and that depends more on the influence of bad governments, closed economies, and militant ideologies than on the sheer availability of land and water. Certainly any connection to terrorism is in the imagination of the terror warriors: terrorists tend to be underemployed lower-middle-class men, not subsistence farmers. As for genocide, the Sudanese government finds it convenient to blame violence in Darfur on desertification, distracting the world from its own role in tolerating or encouraging the ethnic cleansing. In a regression analysis on armed conflicts from 1980 to 1992, Theisen found that conflict was more likely if a country was poor, populous, politically unstable, and abundant in oil, but not if it had suffered from droughts, water shortages, or mild land degradation. (Severe land degradation did have a small effect.) Reviewing analyses that examined a large number (N) of countries rather than cherry-picking one or two, he concluded, "those who foresee doom, because of the relationship between resource scarcity and violent internal conflict, have very little support in the large-N literature." Salehyan adds that relatively inexpensive advances in water use and agriculture practices in the developing world can yield massive increases in productivity with a constant or even shrinking amount of land, and that better governance can mitigate the human costs of environmental damage, as it does in developed democracies. Since the state of the environment is at most one ingredient in a mixture that depends far more on political and social organization, resource wars are far from inevitable, even in a climate-changed world.

#### Long timeframe and adaptation solves

Robert O. Mendelsohn 9, the Edwin Weyerhaeuser Davis Professor, Yale School of Forestry and Environmental Studies, Yale University, June 2009, “Climate Change and Economic Growth,” online: http://www.growthcommission.org/storage/cgdev/documents/gcwp060web.pdf

The heart of the debate about climate change comes from a number of warnings from scientists and others that give the impression that human-induced climate change is an immediate threat to society (IPCC 2007a,b; Stern 2006). Millions of people might be vulnerable to health effects (IPCC 2007b), crop production might fall in the low latitudes (IPCC 2007b), water supplies might dwindle (IPCC 2007b), precipitation might fall in arid regions (IPCC 2007b), extreme events will grow exponentially (Stern 2006), and between 20–30 percent of species will risk extinction (IPCC 2007b). Even worse, there may be catastrophic events such as the melting of Greenland or Antarctic ice sheets causing severe sea level rise, which would inundate hundreds of millions of people (Dasgupta et al. 2009). Proponents argue there is no time to waste. Unless greenhouse gases are cut dramatically today, economic growth and well‐being may be at risk (Stern 2006).

These statements are largely alarmist and misleading. Although climate change is a serious problem that deserves attention, society’s immediate behavior has an extremely low probability of leading to catastrophic consequences. The science and economics of climate change is quite clear that emissions over the next few decades will lead to only mild consequences. The severe impacts predicted by alarmists require a century (or two in the case of Stern 2006) of no mitigation. Many of the predicted impacts assume there will be no or little adaptation. The net economic impacts from climate change over the next 50 years will be small regardless. Most of the more severe impacts will take more than a century or even a millennium to unfold and many of these “potential” impacts will never occur because people will adapt. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long‐range climate risks. What is needed are long‐run balanced responses.

#### Transportation outweighs

**Gordon, 10** – nonresident senior associate in Carnegie’s Energy and Climate Program, where her research focuses on climate, energy, and transportation issues in the United States and China (Deborah, December. “The Role of Transportation in Driving Climate Disruption.” http://carnegieendowment.org/files/transport\_climate\_disruption.pdf)

Climate impacts differ by sector. On-road transportation has the greatest negative effect on climate, especially in the short term. This is primarily because of two factors unique to on-road transportation: (1) nearly exclusive use of petroleum fuels, the combustion of which results in high levels of the principal warming gases (carbon dioxide, ozone, and black carbon); and (2) minimal emissions of sulfates, aerosols, and organic carbon from on-road transportation sources to counterbalance warming with cooling effects. Scientists find that cutting on-road transportation climate and air-pollutant emissions would be unambiguously good for the climate (and public health) in the near term. Transportation’s role in climate change is especially problematic, given the dependence on oil that characterizes this sector today. There are too few immediate mobility and fuel options in the United States beyond oil-fueled cars and trucks. U.S. and international policy makers have yet to tackle transportationclimate challenges. In its fourth assessment report, the Intergovernmental Panel on Climate Change (IPCC) found that the global transportation sector was responsible for the most rapid growth in direct greenhouse gas emissions, a 120 percent increase between 1970 and 2004. To further complicate matters, the IPCC projects that, without policy intervention, the rapidly growing global transportation sector has little motivation to change the way it operates, because consumer choices are trumping best practices. Herein lies a fundamental mismatch between the climate problem and solutions: transportation is responsible for nearly one of every three tons of greenhouse gas emissions but represents less than one of every twelve tons of projected emission reductions. Clearly this sector is a major contributor to climate change; therefore, it should be the focus of new policies to mitigate warming. Government must lead this effort as the market alone cannot precipitate the transition away from cars and oil, which dominate this sector.

#### Can’t solve developing countries

**Socolow and Glaser, 9** – Professor of Mechanical and Aerospace Engineering at Princeton University and Assistant Professor at the Woodrow Wilson School of Public and International Affairs and in the Department of Mechanical and Aerospace Engineering at Princeton University (Robert H. and Alexander, Fall. “Balancing risks: nuclear energy & climate change.” Dædalus Volume 138, Issue 4, pp. 31-44. MIT Press Journals.)

In this paper we consider a nuclear future where 1,500 GW of base load nuclear power is deployed in 2050. A nuclear fleet of this size would contribute about one wedge, if the power plant that would have been built instead of the nuclear plant has the average CO2 emissions per kilowatt hour of all operating plants, which might be half of the value for a coal plant. Base load power of 1,500 GW would contribute one fourth of total electric power in a business-as-usual world that produced 50,000 terawatt-hours (TWh) of electricity per year, two-and-a-half times the global power consumption. However, in a world focused on climate change mitigation, one would expect massive global investments in energy efficiency–more efficient motors, compressors, lighting, and circuit boards–that by 2050 could cut total electricity demand in half, relative to business as usual. In such a world, 1,500 GW of nuclear power would provide half of the power. We can get a feel for the geopolitical dimension of climate change mitigation from the widely cited scenarios by the International Energy Agency (iea) presented annually in its World Energy Outlook (weo), even though these now go only to 2030. The weo 2008 estimates energy, electricity, and CO2 emissions by region. Its 2030 world emits 40.5 billion tons of CO2, 45 percent from electric power plants. The countries of theOrganisation for Economic Co-operation and Development (oecd) emit less than one third of total global fossil fuel emissions and less than one third of global emissions from electric power production. By extrapolation, at midcentury the oecd could contribute only one quarter of the world’s greenhouse gas emissions. It is hard for Western analysts to grasp the importance of these numbers. The focus of climate change mitigation today is on leadership from the OECD countries, which are wealthier and more risk averse. But within a decade, the targets under discussion today can be within reach only if mitigation is in full gear in those parts of the developing world that share production and consumption patterns with the industrialized world. The map (see Figure 1) shows a hypothetical global distribution of nuclear power in the year 2050 based on a highnuclear scenario proposed in a widely cited mit report published in 2003. Three-fifths of the nuclear capacity in 2050 as stated in the mit report is located in the oecd, and more nuclear power is deployed in the United States in 2050 than in the whole world today. The worldview underlying these results is pessimistic about electricity growth rates for key developing countries, relative to many other sources. Notably, per capita electricity consumption in almost every developing country remains below 4,000 kWh per year in 2050, which is one-fifth of the assumed U.S. value for the same year. Such a ratio would startle many analysts today–certainly many in China. It is well within limits of credulity that nuclear power in 2050 could be nearly absent from the United States and the European Union and at the same time widely deployed in several of the countries rapidly industrializing today. Such a bifurcation could emerge, for example, if public opposition to nu clear power in the United States and Europe remains powerful enough to prevent nuclear expansion, while elsewhere, perhaps where modernization and geopolitical considerations trump other concerns, nuclear power proceeds vigorously. It may be that the United States and other countries of the oecd will have substantial leverage over the development of nuclear power for only a decade or so. Change will not happen overnight. Since 2006, almost 50 countries that today have no nuclear power plants have approached the International Atomic Energy Agency (iaea) for assistance, and many of them have announced plans to build one or more reactors by 2020. Most of these countries, however, are not currently in a good position to do so. Many face important technical and economic constraints, such as grid capacity, electricity demand, or gdp. Many have too few trained nuclear scientists and engineers, or lack an adequate regulatory framework and related legislation, or have not yet had a public debate about the rationale for the project. Overall, the iaea has estimated that “for a State with little developed technical base the implementation of the first [nuclear power plant] would, on average, take about 15 years.” 11 This lead time constrains rapid expansion of nuclear energy today. A wedge of nuclear power is, necessarily, nuclear power deployed widely– including in regions that are politically unstable today. If nuclear power is suf-ficiently unattractive in such a deployment scenario, nuclear power is not on the list of solutions to climate change.

### Space Col

#### Extinction not inevitable

**Williams 10** (Lynda, faculty member in physics at Santa Rose Junior College, Peace Review, Jan-Mar, Vol. 22, Issue 1, “Irrational Dreams of Space Colonization,” p. 4-5, ebsco)

According to scientific theory, the destruction of Earth is a certainty. About five billion years from now, when our sun exhausts its nuclear fuel, it will expand in size and envelope the inner planets, including Earth, and burn them into oblivion. So yes, we are doomed, but we have **five billion years**, plus or minus a few hundred million, to plan our extraterrestrial escape. The need to colonize the moon or Mars to guarantee our survival is **not pressing**. There are also real risks due to collisions with asteroids and comets, although none are of immediate threat and do not necessitate extraterrestrial colonization. There are many Earth-based technological strategies that can be developed in time to mediate such astronomical threats, such as gravitational tugboats that drag the objects out of range. The solar system could also potentially be exposed to galactic sources of high-energy gamma ray bursts that could fry all life on Earth; any moon or Mars base would face a similar fate. Thus, human-based colonies on the moon or Mars would not protect us from any of these astronomical threats in the near future.

**Extremely low probabilities should count as zero—even if there’s some risk, policy decisions can’t be justified by vanishingly small probabilities**

**RESCHER 2003** (Nicholas, Prof of Philosophy at the University of Pittsburgh, Sensible Decisions: Issues of Rational Decision in Personal Choice and Public Policy, p. 49-50)

On this issue there is a systemic disagreement between probabilists working on theory-oriented issues in mathematics or natural science and decision theorists who work on practical decision-oriented issues relating to human affairs. The former takes the line that small number are small numbers and must be taken into account as such—that is, the small quantities they actually are. The latter tend to take the view that small probabilities represent extremely remote prospect and can be written off. (De minimis non curat lex, as the old precept has it: in human affairs there is no need to bother with trifles.) When something is about as probable as a thousand fair dice when tossed a thousand times coming up all sixes, then, so it is held, we can pretty well forget about it as a worthy of concern. As a matter of practical policy, we operate with probabilities on the principle that when x ≤ E, then x = 0. We take the line that in our human dealings in real-life situations a sufficiently remote possibility can—for all sensible purposes—be viewed as being of probability zero. Accordingly, such remote possibilities can simply be dismissed, and the outcomes with which they are associated can accordingly be set aside. And in “the real world” people do in fact seem to be prepared to treat certain probabilities as effectively zero, taking certain sufficiently improbable eventualities as no long representing real possibilities. Here an extremely improbable event is seen as something we can simply write off as being outside the range of appropriate concern, something we can dismiss for all practical purposes. As one writer on insurance puts it: [P]eople…refuse to worry about losses whose probability is below some threshold. Probabilities below the threshold are treated as though they were zero. No doubt, remote-possibility events having such a minute possibility can happen in some sense of the term, but this “can” functions somewhat figuratively—it is no longer seen as something that presents a realistic prospect.

#### Space colonization causes asteroid terrorism – extinction

Singer**, 01** (Clifford E., professor of nuclear engineering and director of the Program in Arms Control, Disarmament, and International Security at the University of Illinois at Urbana—Champaign, Spring 2001, Swords and Ploughshares, <http://www.acdis.uiuc.edu/homepage_docs/pubs_docs/S&P_docs/S&P_XIII/Singer.htm>

However **the technology to build isolated extraterrestrial settlements** naturally **brings along with it another potentially powerful technology–the ability to move sizeable asteroids**. Back **in** 19**79** **it was shown that this is not as difficult as one might at first think**. The requisite technique is to land a spacecraft on one asteroid, dig up material and throw it the path of another asteroid that will approach nearby, and perturb the orbit of that asteroid until it passes nearby another large object. Once an asteroid or comet makes a controlled approach near any planet but Mercury or Pluto, then it can easily be directed near or at the earth at enormous velocity. Fortunately for our hypothetical descendants here destroying all human life on earth by asteroid impact would likely require moving objects with a diameter in excess of ten kilometers. While there are many of these, the required orbit perturbation would require a lot of lead-time and work and could be very difficult to motivate and conceal. Nevertheless **with contributions from this technology a dispute between the earth and a handful of its fragile far-flung offspring in space that is carried to the extreme could conceivably lead to human extinction**. Only when settlements in space are sufficiently numerous or far flung would such a possibility effectively be ruled out, primarily by physical considerations.

#### This outweighs the case—probability and timeframe.

Sagan and Ostro 94 — Carl Sagan, Professor and Director of the Laboratory for Planetary Studies at Cornell University, winner of the Oersted Medal, two NASA Distinguished Public Service Medals, the Pulitzer Prize for General Non-Fiction, and the National Academy of Sciences Public Welfare Medal, holds a Ph.D. in Astronomy and Astrophysics from the University of Chicago, and Steven J. Ostro, Director of the Asteroid Radar Group at NASA's Jet Propulsion Laboratory, holds a Ph.D. in Planetary Science from the Massachusetts Institute of Technology, 1994 (“Dangers of Asteroid Deflection,” Nature, Volume 368, Number 6471, April 7th, Available Online to Subscribing Institutions via Nature Online, p. 501)

This proposal is a double-edged sword. If we can perturb an asteroid out of impact trajectory, it follows that we can also transform one on a benign trajectory into an Earth-impactor. For example, the asteroid 1991 OA could in 2070 be deflected into Earth-impact trajectory 5 with an aggregate yield of only about 60 MT. Although a single asteroid can more readily be deflected away from, than into, an impact trajectory, there is not an orders-of-magnitude difference in technical effort; but there are orders-of-magnitude more Earth-crossing asteroids that can be induced to impact the Earth than will do so on their own. With a Spaceguard-like inventory of such asteroids and a launch-ready deflection system of nuclear-armed missiles, it might take only a few years to identify a suitable large asteroid, alter its orbit through a series of nuclear explosions with individual yields of about 10 MT (available in existing arsenals), and send it crashing into Earth.5 There is no other way known in which a few nuclear weapons could by themselves threaten the global civilization. In our view, development of this asteroid-deflection technology would be **premature**. Given twentieth-century history and present global politics, it is hard to imagine guarantees against eventual misuse of an asteroid deflection system commensurate with the dangers such a system poses. Those who argue that it would be prudent to prevent catastrophic impacts with annual probabilities of 10-5 will surely recognize the prudence of preventing **more probable catastrophes of comparable magnitude** from misuse of a potentially apocalyptic technology. It is of course sensible to seek cost-effective reduction of risks from all hazards to our civilization—even low-probability hazards, of which many may remain unidentified. At a total cost of some $300 million, Spaceguard arguably constitutes a reasonable measure of defence against the impact hazard. But premature deployment of any asteroid orbit-modification capability, in the real world and in light of well-established human frailty and fallibility, **may introduce a new category of danger that dwarfs that posed by the objects themselves**.

Space exploration is a self fulfilling prophecy – Turns the aff

Williams, 10 (Lynda, professor of physics, San Francisco State U; “Irrational Dreams of Space Colonization” *The Peace Review*; Spring 2010; <http://www.scientainment.com/lwilliams_peacereview.pdf>)

Life on Earth is more urgently threatened by the destruction of the biosphere and its life sustaining habitat due environmental catastrophes such as climate change, ocean acidification, disruption of the food chain, bio-warfare, nuclear war, nuclear winter, and myriads of other man-made doomsday prophesies. If we accept these threats as inevitabilities on par with real astronomical dangers and divert our natural, intellectual, political and technological resources from solving these problems into escaping them, will we playing into a self- fulfilling prophesy of our own planetary doom? Seeking space based solutions to our Earthly problems may indeed exacerbate the planetary threats we face. This is the core of the ethical dilemma posed by space colonization: should we put our recourses and bets on developing human colonies on other worlds to survive natural and man-made catastrophes or should we focus all of our energies on solving the problems that create these threats on Earth? Human Life on The Moon and Mars What do the prospects of colonies or bases on the Moon and Mars offer? Both the Moon and Mars host extreme environments that are uninhabitable to humans without very sophisticated technological life supporting systems beyond any that are feasible now or will be available in the near future. Both bodies are subjected to deadly levels of solar radiation and are void of atmospheres that could sustain oxygen-based life forms such as humans. Terra- forming either body is not feasible with current technologies or within any reasonable time frames so any colony or base would be restricted to living in space capsules or trailer park like structures which could not support a sufficient number of humans to perpetuate and sustain the species in any long term manner. Although evidence of water has been discovered on both bodies, it exists in a form that is trapped in minerals, which would require huge amounts of energy to access. Water can be converted into fuel either as hydrogen or oxygen, which would eliminate the need to transport vast amounts of fuel from Earth. However, according to Britain's leading spaceflight expert, Professor Colin Pillinger, "You would need to heat up a lot of lunar soil to 200C to get yourself a glass of water." The promise of helium as an energy source on the moon to is mostly hype. Helium-3 could be used in the production of nuclear fusion energy, a process we have yet to prove viable or efficient on Earth. Mining helium would require digging dozens of meters into the lunar surface and processing hundreds of thousands of tons of soil to produce 1 ton of helium-3. (25 tons of helium-3 is required to power the US for 1 year.) Fusion also requires the very rare element tritium, which does not exist naturally on the Moon, Mars or on Earth in abundances needed to facilitate nuclear fusion energy production. There are no current means for generating the energy on the Moon to extract the helium-3 to produce the promised endless source of energy from helium-3 on the Moon. Similar energy problems exist for using solar power on the Moon, which has the additional problem of being sunlit two weeks a month and dark for the other two weeks. A Moon base is envisioned as serving as a launch pad for Martian expeditions, so the infeasibility of a lunar base may prohibit trips to Mars, unless they are launched directly from Earth. Mars is, in its closest approach, 36 million miles from Earth and would require a nine-month journey with astronauts exposed to deadly solar cosmic rays. Providing sufficient shielding would require a spacecraft that weighs so much it becomes prohibitive to carry enough fuel for a roundtrip. Either the astronauts get exposed to lethal doses on a roundtrip, or they make a safe one-way journey and never return. Either way, no one can survive a trip to Mars and whether or not people are willing to make that sacrifice for the sake of scientific exploration, human missions to Mars do not guarantee the survival of the species, but rather, only the death of any member who attempts the journey.Space Law and Space Ethics The technological hurdles prohibiting practical space colonization of the Moon and Mars in the near future are stratospherically high. The environmental and political consequences of pursuing these lofty dreams are even higher. There are no international laws governing the Moon or the protection of the space environment. The Moon Treaty, created in 1979 by the United Nations, declares that the Moon shall be developed to benefit all nations and that no military bases could be placed on the moon or on any celestial body, and bans altering the environment of celestial bodies. To date, no space faring nation has ratified this treaty, meaning, the moon, and all celestial bodies, including Mars and asteroids are up for the taking. If a nation did place a military base on the moon, they could potentially control all launches from Earth. The Moon is the ultimate military high ground. How should we, as a species, control the exploration, exploitation and control of the Moon and other celestial bodies if we can not even agree on a legal regime to protect and share its resources? Since the space race began 50 years ago with the launch of Sputnik, the space environment around Earth has become overcrowded with satellites and space debris, so much so, that circumterrestrial space has become a dangerous place with an increasing risk of collision and destruction. Thousands of pieces of space junk created from launches orbit the Earth in the same orbit as satellites, putting them at risk of collision. Every time a rocket is launched, debris from the rocket stages are put into orbital space. In 2009 there was a disastrous collision between an Iridium satellite and a piece of space junk that destroyed the satellite. In 2007 China blew up one of its defunct satellites to demonstrate its antiballistic missile capabilities, increasing the debris field by 15%. There are no international laws prohibiting anti-satellite actions. Every year, since the mid 1980s, a treaty has been introduced into the UN for a Prevention of an Arms Race in Outer Space (PAROS), with all parties including Russia and China voting for it except for the US. How can we hope to pursue a peaceful and environmentally sound route of space exploration without international laws in place that protect space and Earth environments and guarantee that the space race to the moon and beyond does not foster a war over space resources? Indeed, if the space debris problem continues to grow unfettered or if there is war in space, space will become too trashed for launches to take place without risk of destruction. The private development of space is growing at a flurried rate. Competitions such as the X-Prize for companies to reach orbit and the Google Prize to land a robot on the Moon has launched space wanderlust in citizens throughout the country who dream of traveling to space. The reality is that there are few protections for the environment and the passengers of these flights of fancy. The FAA, which regulates space launches, is under a Congressional mandate to foster the industry. It is difficult if not impossible to have objective regulation of an industry when it enjoys government incentives to profit. We have much to determine on planet Earth before we launch willy nilly into another race into space and a potential environmental disaster and arms race in outer space. Spaceship Earth If we direct our intellectual and technological resources toward space exploration without consideration of the environmental and political consequences, what is left behind in the wake? The hype surrounding space exploration leaves a dangerous vacuum in the collective consciousness of solving the problems on Earth. If we accept the inevitability of Earth’s destruction and its biosphere, we are left looking toward the heavens for our solutions and resolution. Young scientists, rather than working on serious environmental challenges on Earth, dream of Moon or Martian bases to save humanity, fueling the prophesy of our planetary destruction, rather than working on solutions to solve the problems on Earth. Every space faring entity, be they governmental or corporate, face the same challenges. Star Trek emboldened us all to dream of space, the final frontier. The reality is that our planet Earth is a perfect spaceship. We travel around our star the sun once every year, and the sun pull us with her gravitational force around the galaxy once every 250 million years through star systems, star clusters and all the possible exosolar planets that may host life or be habitable for us to colonize. The sun will be around for billions of years and we have ample time to explore the stars. It would be wise and prudent for us as a species to focus our intellectual and technological knowledge now into preserving our spaceship for the long voyage through the stars, so that once we have figured out how to make life on Earth work in an environmentally and politically sustainable way, we can then venture off the planet into the final frontier of our dreams.

**Colonization fails—**

**1) Medical dangers and technological barriers**

**Egan and Kreso 11** – (2011, Michael Egan and John Kreso, thesis paper submitted in fulfillment of a BS degree at WPI, advised by Professor Mayer Humi, Mathematical Sciences, Worcester Polytechnic Institute, “Expediting Factors in Developing a Successful Space Colony,” <http://www.wpi.edu/Pubs/E-project/Available/E-project-041911-134845/unrestricted/IQP_Final.pdf>)

Currently, it is still not technologically feasible to colonize space. Although many countries and a few private corporations have the capability to travel to space, the high levels of technology needed to sustain human life in space still do not exist. A more efficient method of propulsion is needed to make space missions more economically feasible. The high cost of launching objects into space, which would be undoubtedly necessary to start a colony, is still a deterrent for large missions. Until more frequent and cheaper ways of sending people and goods into LEO exists, the planning stages of creating the first space colony will not even be possible. Also, protecting the human body from the harsh conditions of space becomes a much greater problem when the time spend in space is years instead of months. Bioengineering is a key factor that can combat the negative effects on humans. This can be done either by adapting humans to be more resistant to these effects, or by creating better protective suits and ways to ensure the prolonged health of humans. Even if the propulsion technology and infrastructure were available in space to start a colony, without better ways to guarantee the safety of humans the first colonies still would not be able to sustain human life.

**2) Reproduction**

**The Week, 11**(news source, 2/17/11 <http://theweek.com/article/index/212267/why-humans-will-never-colonize-space> “Why humans will never colonize space”)

Sorry, Stephen Hawking. The astrophysicist's [grandiose plan for the human race](http://www.dailymail.co.uk/sciencetech/article-1301482/Human-race-colonise-space-face-extinction-warns-Stephen-Hawking.html) to leave Earth and colonize the far reaches of space may never come to fruition. Why? Because NASA has discovered that space is "[simply not a good place to have sex.](http://www.independent.co.uk/news/science/why-infertility-will-stop-humans-colonising-space-2213861.html)" Here, a quick guide to our outer-space fertility problem: Why couldn't humans colonize space? Because any child conceived and born in space is likely to be born sterile. Scientists at NASA say that the high levels of **radiation in space would kill any female fetus' lifetime supply of eggs, while males in the womb would likely become sterile.** The child could also suffer "mental and physical defects" from exposure to harmful radiation. Couldn't spaceships protect against this kind of radiation? No. These are no ordinary protons, but high-energy proton particles from galactic cosmic rays. We on Earth are kept safe from them by our atmosphere and magnetic field, but astronauts in space remain vulnerable. Has anyone had sex in space before? It's not clear, [says Jason Mick at Daily Tech](http://www.dailytech.com/Researchers+Study+Sex+and+Pregnancy+in+Space+Say+it+Will+be+Hard/article20904.htm). Both NASA and the Russians refuse to reveal if their astronauts had ever attempted "zero-G docking maneuvers" in space. The only couple to have traveled together into space — husband and wife team Jan Davis and Mark Lee — remain tight-lipped about whether or not they "got their stellar groove on."

**3) Radiation**

**Durante and Cucionotta 8** – (2008, Marco Durante, recently appointed as the Director of the Biophysics Department at GSI, Darmstadt, Germany, former Associate Professor of Physics at the University of Naples Federico II, Italy and Adjunct Professor at the Temple University, and Francis A. Cucinotta, has served at the National Aeronautics and Space Administration (NASA) for 20 years and is currently the Chief Scientist for the NASA Space Radiation Program, leading NASA's efforts to understand and mitigate the health risks from space radiation and to determine radiation limits for astronauts on the International Space Station and the lunar and Mars missions, “ Heavy ion carcinogenesis and human space exploration,” Science and Society, Nature Reviews Cancer 8, 465-472 (June 2008), nature reviews)

**Before the human exploration** of Mars or long-duration missions on the Earth's moon, **the risk of cancer and other diseases from space radiation must be** accurately estimated and **mitigated**. Space radiation, comprised of energetic protons and heavy nuclei, has been shown to produce distinct biological damage compared with radiation on Earth, leading to large uncertainties in the projection of cancer and other health risks, and obscuring evaluation of the effectiveness of possible countermeasures. Here, we describe how research in cancer radiobiology can support human missions to Mars and other planets. Space radiation, isolation (psychosocial problems) and microgravity-induced physiological changes are the main health problems for the exploration of the Solar system. Among the various health risks, **carcinogenesis caused by exposure to space radiation is now generally considered the main hindrance to interplanetary travel** for the following reasons: large uncertainties are associated with the projected cancer risk estimates, no simple and effective countermeasures are available, and the large uncertainties prevent determining the effectiveness of countermeasures. Optimizing operational parameters such as the length of space missions and crew selection for age and gender, or applying mitigation measures, such as radiation shielding or use of biological countermeasures, can reduce risk, but these approaches are clouded by uncertainties. Space radiation is comprised of high-energy protons and high charge (Z) and energy (E) nuclei (HZE), whose ionization patterns in molecules, cells and tissues, and the resulting initial biological insults, are distinct from typical terrestrial radiation. Terrestrial radiation is largely characterized by low linear energy transfer (LET) radiation (X-, - or -rays), with the exception of the dose localized to the lungs caused by low-energy -particles from radon gas. HZE nuclei dominate the exposure in deep space (interplanetary travels), whereas trapped protons also contribute to the equivalent dose absorbed by crews in low-Earth-orbit (Space Shuttle flights or International Space Station). Box 1 and Fig. 1 provide a physics primer on space radiation types and the differences in energy deposition in biomolecules, cells and tissues. The relationships between the early biological effects of HZE nuclei and the probability of cancer in humans are poorly understood 1, 2, 3, and it is this missing knowledge that leads to large uncertainties in projecting cancer risks (Box 2 and Fig. 2) during space exploration.

#### 4) psychological problems would destroy the society

Marsh et al. 08 (Melinda, M.S. Marsh & Associates, Vadim Y. Rygalov 2 University of North Dakota, David M. Livingston 3 The Space Show, “Life Support Systems Functional Stability and Human Control Limitations- An Astrosociological Approach “, http://www.astrosociology.org/Library/PDF/MarshEtAl\_LifeSupport.pdf)

As a closed system is dependent only on itself for survival, the crewmembers have a more unique and more stressful life than a more traditional open system. While a decrease in dietary diversity has lead to decreased overall health in the past, only a small portion of our modern diet is being researched for use in the space program likely leading to further deterioration of health. 63 Being in an enclosed environment has also led to psychological instability and acute mental stress, as several experiments in polar psychology have shown. 64-65 American Institute of Aeronautics and Astronautics 7 Stress and its effect on health are also increased due to increased isolation, decreased ability to escape, increased responsibility for the CES, and decreased privacy and personal space. 66-69 Increased stress has led to psychological incidents including increased aggression, disturbing fantasies, anxiety, depression, hallucinations, near loss of a crewmember, and withdrawing from the group. 70-71 These psychological incidences if severe enough could result in loss of the craft or crew. For more information, please see Reference 72.

**5) Bacterial mutations**

**National Geographic 09** (“ Mutant Diseases May Cripple Missions to Mars, Beyond”, November 4th, 2009, <http://news.nationalgeographic.com/news/2009/11/091104-space-diseases-mutants-mars.html>)

Mutant hitchhikers may become a major hurdle in the quest to send humans deeper into the galaxy, scientists say. That's because no matter how fit astronauts feel at liftoff, they're likely to be carrying disease-causing microbes such as toxic E. coli and Staphylococcus strains. At the same time, exposure to cosmic rays and the stresses of long-term weightlessness can dampen the human immune system, encouraging diseases to take hold. Aboard spaceships without advanced medical care, illness could cripple human missions to Mars and beyond, according to a new report published this month in the Journal of Leukocyte Biology. "What is the interest of having people on Mars if they cannot efficiently perform the analyses and studies scheduled during their mission?" said study co-author Jean-Pol Frippiat, an immunologist at Nancy University in France. Cells Change in Zero G For the new report, Frippiat and colleagues analyzed more than 150 studies of the effects of space flight on humans, animals, and pathogens. On Earth humans are protected from the effects of cosmic rays, because most of the particles are deflected by the planet's magnetic field. Out in space, however, such protections vanish, and cosmic radiation can cause mutations when it strikes the DNA inside cells. The absence of gravity can also be detrimental to human health, because weightlessness allows structures to shift around within cells.

#### 6) No water—terraforming not possible

**Williams, 10** (Lynda,Physics Instructor, Santa Rosa Junior College,Peace Review, a Journal of Social Justice; “Irrational Dreams of Space Colonization”; Spring 2011; <http://www.scientainment.com/lwilliams_peacereview.pdf>)

What do the prospects of colonies or bases on the Moon and Mars offer? Both the Moon and Mars host extreme environments that are uninhabitable to humans without very sophisticated technological life supporting systems beyond any that are feasible now or will be available in the near future. Both bodies are subjected to deadly levels of solar radiation and are void of atmospheres that could sustain oxygen-based life forms such as humans. Terra- forming either body is not feasible with current technologies or within any reasonable time frames so any colony or base would be restricted to living in space capsules or trailer park like structures which could not support a sufficient number of humans to perpetuate and sustain the species in any long term manner. Although evidence of water has been discovered on both bodies, it exists in a form that is trapped in minerals, which would require huge amounts of energy to access. Water can be converted into fuel either as hydrogen or oxygen, which would eliminate the need to transport vast amounts of fuel from Earth. However, according to Britain's leading spaceflight expert, Professor Colin Pillinger, "You would need to heat up a lot of lunar soil to 200C to get yourself a glass of water." The promise of helium as an energy source on the moon to is mostly hype. Helium-3 could be used in the production of nuclear fusion energy, a process we have yet to prove viable or efficient on Earth. Mining helium would require digging dozens of meters into the lunar surface and processing hundreds of thousands of tons of soil to produce 1 ton of helium-3. (25 tons of helium-3 is required to power the US for 1 year.) Fusion also requires the very rare element tritium, which does not exist naturally on the Moon, Mars or on Earth in abundances needed to facilitate nuclear fusion energy production. There are no current means for generating the energy on the Moon to extract the helium-3 to produce the promised endless source of energy from helium-3 on the Moon. Similar energy problems exist for using solar power on the Moon, which has the additional problem of being sunlit two weeks a month and dark for the other two weeks.

**7) No oxygen – it can’t be produced quickly or efficiently enough**

**Ayres 7** – (2007, Robert, PhD, Mathematical Physics, Kings College, University of London, Emeritus Professor of Economics and Political Science and Technology Management, and professor of Management and the Environment, Institut Européen d'Administration des Affaires (international business gschool and research institution), Visiting Professor at Chalmers University Gothenburg, Adjunct Professor of Mineral Economics at Pennsylvania State University, “On the practical limits to substitution,” Ecological Economics 61 (2007) 115-128)

The specific question addressed in this paper is the following: given the properties of real materials and technologies, and the composition of the earth's crust, is it conceivable that man-made capital could replace all natural capital–including biospheric and ecological services–within the next two centuries? A slightly weaker question can be rephrased in the following way: within the next 200 years could we humans learn to ‘terraform’ (in the language of science fiction) a totally barren planet of the right mass and the right distance from a suitable star, given only solar energy, water and crustal rock of average composition? (Actually the moon would be a suitable test case.) If the answer is ‘yes’, then Solow's optimistic view is not unreasonable. If the answer is ‘no’ then the unlimited substitution hypothesis is not tenable. I believe the answer is ‘no’. Some reasons follow: (1) We humans–and all the animals we depend upon– require an oxygen atmosphere. Oxygen is too reactive for such an atmosphere to be naturally self-sustaining in the absence of plant life. The carbon–oxygen cycle on earth is currently not in balance. Oxygen is being consumed and free carbon is being oxidized. There is still plenty of free oxygen left (it accumulated for several hundred million years) but this imbalance would have to be corrected for long-term planetary sustainability. Otherwise we would have to produce oxygen electro-chemically and live under airtight domes, as any lunar colony would have to do. The stocks of oxygen that took hundreds of millions of years to accumulate on earth in the first place could not be replaced, or created from scratch, much more quickly than they accumulated in the first place. The atmosphere is undoubtedly one of the most important of the ‘low entropy’ endowments we inherited from the geological past of the earth. To produce the amounts of free oxygen that we now consume annually without fossil fuels and plant life–i.e., from water or carbon dioxide–would require a process equivalent to biological photosynthesis and not much less efficient. The primary exergy required to drive the global economy amounts to only a small fraction (a little more than 0.01%) of the total solar exergy impinging on the earth's surface. Biological photosynthesis efficiency varies from crop to crop, the highest being sugar cane and similar grasses (around 10%), though the average is much less, perhaps 0.1%–0.5%. Optimists note that photovoltaic (PV) cells already achieve up to 25% conversion efficiency and that the upper limit is certainly higher (Ayres and Frankl, 1998). On the other hand, the most efficient PV cells, such as dual junction thin films (GaInP2/ GaAs) or triple junction (GaInP2/GaAs/Ga) require extremely scarce elements, especially indium (Andersson and Rade, 2002). Silicon cells seem to be limited to about 20% conversion efficiency. But, unlike plants, PV cells are not self-reproducing. Nobody can estimate the overall efficiency of a self-reproducing industrial system producing PV cells and using the electric power to drive all of the other essential manufacturing processes, including mining, purification, fabrication, construction (of panels and supports), electrical circuitry, electrolytic cells to produce hydrogen and oxygen, and synthesis of carbohydrates, fats and amino acids need for human nutrition. While it is said that modern PV cells can “pay for themselves” in terms of net energy output within a few years, such calculations do not take into account all the indirect downstream energy requirements of such an industrial system.

**8) No plants -- can’t be transported or grown in space – microgravity creates bacterial and abiotic dangers.**

**Leach et. al. 1** – (2001, Jan, PhD in plant pathology, University Distinguished Professor of plant pathology at

Colorado State University and an Adjunct Scientist at the International Rice Research Institute, “Plants, Plant Pathogens, and Microgravity – A Deadly Trio,” Gravitational and Space Biology Bulletin 14(2) June 2001, google scholar, DH)

As on earth, efficient production of crops in space requires an understanding of the physical and biological requirements and parameters for optimal growth of the crop plant. This is a major focus of NASA efforts to support space-based plant growth technologies both for shuttle-based experimentation, and onboard the international space station. The efficiency of crop production worldwide testifies to the benefits of the application of this knowledge on earth. In the United States alone, the agribusiness sector contributes over $1 trillion annually, and accounts for nearly 15% of the U.S. Gross Domestic Product. Our agricultural exports amount to approximately $60 billion annually, with nearly a $20 billion positive contribution to our balance of trade. Despite the efficiency of cropping systems on earth, the exploration of the unique requirements for crop production in space is in its infancy. Several studies indicate that microgravity has a profound impact on plant cell development, cytology, and physiology (for review, see Cowles et al., 1989; Dutcher et al., 1994; Halstead and Dutcher, 1984; Krikorian et al., 1992; Krikorian and Levine, 1991; Nedukha, 1997; Tripathy et al., 1996). For example, carbon partitioning is different after growth in spaceflight than after growth in unit gravity, that is, a shift from the storage of starch (which is under the control of enzymes in the plastid) toward carbon accumulation as lipid (under cytosolic regulatory control) occurs (Brown et al., 1995a; Brown et al., 1999; Brown and Huber, 1987; Brown and Huber, 1988). Therefore, microgravity factors are important in the regulation of plastid events, and certainly play a role in regulating the expression of genes encoding important proteins. Results from another experiment (BPAC; Cooperative US/Ukrainian Experiment; CUE, STS-87, 1997) document that photosynthetic processes are altered during spaceflight. Key differences were observed in thylakoid membrane stacking, photosynthetic electron transport rates and a reduction in the amount of the photosystem I complex (authors, unpublished). These **alterations may not only reduce plant yields, but may also have a significant impact on the plant’s ability to appropriately perceive and respond to stresses, whether abiotic** (environmental factors) or biotic (pathogens). Indeed, there is mounting evidence that plants grown in microgravity are more susceptible to colonization by both opportunistic microorganisms and pathogens (Bishop et al., 1997; Nedukha et al., 1998; Ryba-White et al., 2001). Taken together, the evidence from space flight experiments with plants clearly indicates that growth in microgravity has a significant impact on the overall physiology of plants, and therefore, by reduction, the overall gene expression of the plant. Unfortunately, these past studies were limited in that only a few physiological responses or biochemical pathways could be explored at a time, and the selection of those pathways was understandably biased by the expertise of the scientists involved. Now, with advances in genomics research, we have the tools to minimize this bias and to look at the global impact of growth in spaceflight on plant gene expression. These advances include an expanding database of genomic and cDNA sequences for a number of plants, including rice, and new technologies that allow large-scale systematic gene expression studies (DNAarray technologies for gene expression profiling).

**9) Temperature and pressure**

**Stross 7 –** [Charles, technical author; freelance journalist; author of The Web Architect’s Handbook; specializes in space opera and hard science fiction [characterized by an emphasis on scientific or technical detail and scientific accuracy, “The High Frontier, Redux,” 06-16-07, <http://www.antipope.org/charlie/blog-static/2007/06/the_high_frontier_redux.html>]

Optimistic projects suggest that it should be possible, with the low cost rockets currently under development, to maintain a Lunar presence for a transportation cost of roughly $15,000 per kilogram. Some extreme projections suggest that if the cost can be cut to roughly triple the cost of fuel and oxidizer (meaning, the spacecraft concerned will be both largely reusable and very cheap) then we might even get as low as $165/kilogram to the lunar surface. At that price, sending a 100Kg astronaut to Moon Base One looks as if it ought to cost not much more than a first-class return air fare from the UK to New Zealand ... except that such a price estimate is hogwash. We primates have certain failure modes, and one of them that must not be underestimated is our tendency to irreversibly malfunction when exposed to climactic extremes of temperature, pressure, and partial pressure of oxygen. While the amount of oxygen, water, and food a human consumes per day doesn't sound all that serious — it probably totals roughly ten kilograms, if you economize and recycle the washing-up water — the amount of parasitic weight you need to keep the monkey from blowing out is measured in tons. A Russian Orlan-M space suit (which, some would say, is better than anything NASA has come up with over the years — take heed of the pre-breathe time requirements!) weighs 112 kilograms, which pretty much puts a floor on our infrastructure requirements. An actual habitat would need to mass a whole lot more. Even at $165/kilogram, that's going to add up to a very hefty excess baggage charge on that notional first class air fare to New Zealand — and I think the $165/kg figure is in any case highly unrealistic; even the authors of the article I cited thought $2000/kg was a bit more reasonable. Whichever way you cut it, sending a single tourist to the moon is going to cost not less than $50,000 — and a more realistic figure, for a mature reusable, cheap, rocket-based lunar transport cycle is more like $1M. And that's before you factor in the price of bringing them back ... The moon is about 1.3 light seconds away. If we want to go panning the (metaphorical) rivers for gold, we'd do better to send teleoperator-controlled robots; it's close enough that we can control them directly, and far enough away that the cost of transporting food and creature comforts for human explorers is astronomical. There probably are niches for human workers on a moon base, but only until our robot technologies are somewhat more mature than they are today; Mission Control would be a lot happier with a pair of hands and a high-def camera that doesn't talk back and doesn't need to go to the toilet or take naps. When we look at the rest of the solar system, the picture is even bleaker. Mars is ... well, the phrase "tourist resort" springs to mind, and is promptly filed in the same corner as "Gobi desert". As Bruce Sterling has puts it: "I'll believe in people settling Mars at about the same time I see people settling the Gobi Desert. The Gobi Desert is about a thousand times as hospitable as Mars and five hundred times cheaper and easier to reach. Nobody ever writes "Gobi Desert Opera" because, well, it's just kind of plonkingly obvious that there's no good reason to go there and live. It's ugly, it's inhospitable and there's no way to make it pay. Mars is just the same, really. We just romanticize it because it's so hard to reach." In other words, going there to explore is fine and dandy — our robots are all over it already. But as a desirable residential neighbourhood it has some shortcomings, starting with the slight lack of breathable air and the sub-Antarctic nighttime temperatures and the Mach 0.5 dust storms, and working down from there. Actually, there probably is a good reason for sending human explorers to Mars. And that's the distance: at up to 30 minutes, the speed of light delay means that remote control of robots on the Martian surface is extremely tedious. Either we need autonomous roots that can be assigned tasks and carry them out without direct human supervision, or we need astronauts in orbit or on the ground to boss the robot work gangs around. On the other hand, Mars is a good way further away than the moon, and has a deeper gravity well. All of which drive up the cost per kilogram delivered to the Martian surface. Maybe FedEx could cut it as low as $20,000 per kilogram, but I'm not holding my breath. Let me repeat myself: we are not going there with rockets. At least, not the conventional kind — and while there may be a role for nuclear propulsion in deep space, in general there's a trade-off between instantaneous thrust and efficiency; the more efficient your motor, the lower the actual thrust it provides. Some technologies such as the variable specific impulse magnetoplasma rocket show a good degree of flexibility, but in general they're not suitable for getting us from Earth's surface into orbit — they're only useful for trucking things around from low earth orbit on out. Again, as with interstellar colonization, there are other options. Space elevators, if we build them, will invalidate a lot of what I just said. Some analyses of the energy costs of space elevators suggest that a marginal cost of $350/kilogram to geosynchronous orbit should be achievable without waving any magic wands (other than the enormous practical materials and structural engineering problems of building the thing in the first place). So we probably can look forward to zero-gee vacations in orbit, at a price. And space elevators are attractive because they're a scalable technology; you can use one to haul into space the material to build more. So, long term, space elevators may give us not-unreasonably priced access to space, including jaunts to the lunar surface for a price equivalent to less than $100,000 in today's money. At which point, settlement would begin to look economically feasible, except ... We're human beings. We evolved to flourish in a very specific environment that covers perhaps 10% of our home planet's surface area. (Earth is 70% ocean, and while we can survive, with assistance, in extremely inhospitable terrain, be it arctic or desert or mountain, we aren't well-adapted to thriving there.) Space itself is a very poor environment for humans to live in. A simple pressure failure can kill a spaceship crew in minutes. And that's not the only threat. Cosmic radiation poses a serious risk to long duration interplanetary missions, and unlike solar radiation and radiation from coronal mass ejections the energies of the particles responsible make shielding astronauts extremely difficult. And finally, there's the travel time. Two and a half years to Jupiter system; six months to Mars. Now, these problems are subject to a variety of approaches — including medical ones: does it matter if cosmic radiation causes long-term cumulative radiation exposure leading to cancers if we have advanced side-effect-free cancer treatments? Better still, if hydrogen sulphide-induced hibernation turns out to be a practical technique in human beings, we may be able to sleep through the trip. But even so, when you get down to it, there's not really any economically viable activity on the horizon for people to engage in that would require them to settle on a planet or asteroid and live there for the rest of their lives. In general, when we need to extract resources from a hostile environment we tend to build infrastructure to exploit them (such as oil platforms) but we don't exactly scurry to move our families there. Rather, crews go out to work a long shift, then return home to take their leave. After all, there's no there there — just a howling wilderness of north Atlantic gales and frigid water that will kill you within five minutes of exposure. And that, I submit, is the closest metaphor we'll find for interplanetary colonization. Most of the heavy lifting more than a million kilometres from Earth will be done by robots, overseen by human supervisors who will be itching to get home and spend their hardship pay. And closer to home, the commercialization of space will be incremental and slow, driven by our increasing dependence on near-earth space for communications, positioning, weather forecasting, and (still in its embryonic stages) tourism. But the domed city on Mars is going to have to wait for a magic wand or two to do something about the climate, or reinvent a kind of human being who can thrive in an airless, inhospitable environment.

**10) Cellular skeletal problems**

**BBC** **00** (7/12/2000, “Space living 'would damage health'”, <http://news.bbc.co.uk/2/hi/health/830193.stm>)

Scientists have uncovered a compelling reason why the dream of colonising space may be a non-starter. It seems that the skeletons within living cells may not form properly in zero gravity. This means that it may be impossible to live in space over the long-term without creating a form of artificial gravity. Most cells have skeletons made up of microtubules made from fibres of the protein tubulin. New Scientist magazine reports that Dr James Tabony and his colleagues from the French Atomic Energy Commission mixed up cold solutions of mammalian tubulin with an energy-releasing compound. Chemotherapy drugs Chemotherapy drugs may produce a similar effect When the mixture was warmed to body temperature for six minutes, microtubules began to form in distinct bands at right angles to gravity. Next, the team sent up tubulin on a European Space Agency (Esa) rocket to expose it to the effect of weightlessness. They found that when microtubules formed, they pointed in all directions. Dr Tabony said: "This shows gravity triggers the pattern." Previous work by Dr Marian Lewis of the University of Alabama at Huntsville produced similar results. Dr Lewis's team tested the impact of weightlessness on human white blood cells that were flown on board the space shuttle. After a day in orbit, the microtubules grew in random directions. The findings might explain some of the health problems people living in space have, such as depressed immune systems. Cancer drug effect Professor Brian Anderton, an expert in cell structures at the UK Institute of Psychiatry, said microtubules played a vital role in the successful division of cells. Malformation of microtubules would therefore hinder the process. This could blunt the function of the immune system, which relies on rapid production of white blood cells to fight off invaders when the body is infected. It could also cause problems with the renewal of epithelial tissues which line organs in the body. For instance, it could cause problems with the gut. It might also lead to a thinning of the skin. Similar side effects are produced by anti-cancer drugs, which work by blocking the uncontrolled division of cancer cells. Professor Anderton said: "If it is really true that weightlessness interferes with microtubule function one could expect to see the same kind of adverse effects that are associated with quite a lot of anti-cancer drugs."

## 2NC – Case, Electricity Prices, K

### 2NC No Solvency

#### Thorium sucks – major technical hurdles and will never be viable

Rees, 11 – the Ecologist's acting Green Living Editor (Eifion, 6/23. ““Don't believe the spin on thorium being a greener nuclear option.” http://www.guardian.co.uk/environment/2011/jun/23/thorium-nuclear-uranium)

There is a significant sticking point to the promotion of thorium as the 'great green hope' of clean energy production: it remains unproven on a commercial scale. While it has been around since the 1950s (and an experimental 10MW LFTR did run for five years during the 1960s at Oak Ridge National Laboratory in the US, though using uranium and plutonium as fuel) it is still a next generation nuclear technology – theoretical. China did announce this year that it intended to develop a thorium MSR, but nuclear radiologist Peter Karamoskos, of the International Campaign to Abolish Nuclear Weapons (ICAN), says the world shouldn't hold its breath. 'Without exception, [thorium reactors] have never been commercially viable, nor do any of the intended new designs even remotely seem to be viable. Like all nuclear power production they rely on extensive taxpayer subsidies; the only difference is that with thorium and other breeder reactors these are of an order of magnitude greater, which is why no government has ever continued their funding.' China's development will persist until it experiences the ongoing major technical hurdles the rest of the nuclear club have discovered, he says. Others see thorium as a smokescreen to perpetuate the status quo: the world's only operating thorium reactor – India's Kakrapar-1 – is actually a converted PWR, for example. 'This could be seen to excuse the continued use of PWRs until thorium is [widely] available,' points out Peter Rowberry of No Money for Nuclear (NM4N) and Communities Against Nuclear Expansion (CANE). In his reading, thorium is merely a way of deflecting attention and criticism from the dangers of the uranium fuel cycle and excusing the pumping of more money into the industry. And yet the nuclear industry itself is also sceptical, with none of the big players backing what should be – in PR terms and in a post-Fukushima world – its radioactive holy grail: safe reactors producing more energy for less and cheaper fuel. In fact, a 2010 National Nuclear Laboratory (NNL) report (PDF)concluded the thorium fuel cycle 'does not currently have a role to play in the UK context [and] is likely to have only a limited role internationally for some years ahead' – in short, it concluded, the claims for thorium were 'overstated'. Proponents counter that the NNL paper fails to address the question of MSR technology, evidence of its bias towards an industry wedded to PWRs. Reliant on diverse uranium/plutonium revenue streams – fuel packages and fuel reprocessing, for example – the nuclear energy giants will never give thorium a fair hearing, they say. But even were its commercial viability established, given 2010's soaring greenhouse gas levels, thorium is one magic bullet that is years off target. Those who support renewables say they will have come so far in cost and efficiency terms by the time the technology is perfected and upscaled that thorium reactors will already be uneconomic. Indeed, if renewables had a fraction of nuclear's current subsidies they could already be light years ahead. All other issues aside, thorium is still nuclear energy, say environmentalists, its reactors disgorging the same toxic byproducts and fissile waste with the same millennial half-lives. Oliver Tickell, author of Kyoto2, says the fission materials produced from thorium are of a different spectrum to those from uranium-235, but 'include many dangerous-to-health alpha and beta emitters'. Tickell says thorium reactors would not reduce the volume of waste from uranium reactors. 'It will create a whole new volume of radioactive waste from previously radio-inert thorium, on top of the waste from uranium reactors. Looked at in these terms, it's a way of multiplying the volume of radioactive waste humanity can create several times over.' Putative waste benefits – such as the impressive claims made by former Nasa scientist Kirk Sorensen, one of thorium's staunchest advocates – have the potential to be outweighed by a proliferating number of MSRs. There are already 442 traditional reactors already in operation globally, according to the International Atomic Energy Agency. The by-products of thousands of smaller, ostensibly less wasteful reactors would soon add up. Anti-nuclear campaigner Peter Karamoskos goes further, dismissing a 'dishonest fantasy' perpetuated by the pro-nuclear lobby. Thorium cannot in itself power a reactor; unlike natural uranium, it does not contain enough fissile material to initiate a nuclear chain reaction. As a result it must first be bombarded with neutrons to produce the highly radioactive isotope uranium-233 – 'so these are really U-233 reactors,' says Karamoskos. This isotope is more hazardous than the U-235 used in conventional reactors, he adds, because it produces U-232 as a side effect (half life: 160,000 years), on top of familiar fission by-products such as technetium-99 (half life: up to 300,000 years) and iodine-129 (half life: 15.7 million years).Add in actinides such as protactinium-231 (half life: 33,000 years) and it soon becomes apparent that thorium's superficial cleanliness will still depend on digging some pretty deep holes to bury the highly radioactive waste. With billions of pounds already spent on nuclear research, reactor construction and decommissioning costs – dwarfing commitments to renewables – and proposed reform of the UK electricity markets apparently hiding subsidies to the nuclear industry, the thorium dream is considered by many to be a dangerous diversion. Energy consultant and former Friends of the Earth anti-nuclear campaigner Neil Crumpton says the government would be better deferring all decisions about its new nuclear building plans and fuel reprocessing until the early 2020s: 'By that time much more will be known about Generation IV technologies including LFTRs and their waste-consuming capability.' In the meantime, says Jean McSorley, senior consultant for Greenpeace's nuclear campaign, the pressing issue is to reduce energy demand and implement a major renewables programme in the UK and internationally – after all, even conventional nuclear reactors will not deliver what the world needs in terms of safe, affordable electricity, let alone a whole raft of new ones. 'Even if thorium technology does progress to the point where it might be commercially viable, it will face the same problems as conventional nuclear: it is not renewable or sustainable and cannot effectively connect to smart grids. The technology is not tried and tested, and none of the main players is interested. Thorium reactors are no more than a distraction.'

#### Takes forever

Makhijani, 12 – president of the Institute for Energy and Environmental Research (Arjun, 5/4. “Is Thorium A Magic Bullet For Our Energy Problems?” http://www.npr.org/2012/05/04/152026805/is-thorium-a-magic-bullet-for-our-energy-problems)

MAKHIJANI: I have a favorite molten salt reactor. My reactor is free. It's in the sky, 93 million miles away. You can store its energy in molten salt. It is being done today. You can generate electricity for 24 hours a day. The - so the impermanency problem has been solved. I don't know why - I'm still trying to understand why photovoltaics are still so expensive in this country. But you know Germany - I was at a seminar yesterday at the Heinrich Boll Foundation about the Germany decision to get out of nuclear. They're going to have a completely renewable system maybe by the time thorium reactors become commercial. This isn't going to happen tomorrow, even if you pour money into it. It would take 10 years for the NRC to understand and write regulations for this thing. And it would take 10 years before that to build the reactors, do the experiments and produce the data so you can regulate this thing, because all of our regulation is based on light water reactors.

#### Thorium fails, no one will invest, and there are massive technical challenges

Tickell, 12 – founding partner of Oxford Climate Associates and a member of the Oxford Geoengineering Institute; MA from Oxford University (Oliver, April/May. “Thorium: Not ‘green’, not ‘viable’, and not likely.” http://www.jonathonporritt.com/sites/default/files/users/Thorium%20briefing%20FINAL%203.7.12.pdf)

4.3 Thorium and LFTRs – investment outlook

The development of thorium / LFTR technologies represents a poor investment for national governments, utilities and private investors given:  the marginal benefits to be derived from using thorium fuels in existing reactor designs;  the very long-term nature of any benefit that may be realised from LFTRs, of the order of half a century;  the uncertainty as to whether the very significant technical challenges of the LFTR will ever be overcome;  the possibility that the materials used for reactor construction may degrade more rapidly than anticipated, causing early shut-down;  the likely very high cost of LFTR electricity – especially when compared against the anticipated low future cost of electricity from renewable sources, solar in particular, over the applicable time frame.

#### Consumer pressure deters utility investment

Washington Post, 12 (Eric Niiler, 2/20. “Nuclear power entrepreneurs push thorium as a fuel.” http://www.washingtonpost.com/national/health-science/nuclear-power-entrepreneurs-push-thorium-as-a-fuel/2011/12/15/gIQALTinPR\_story\_2.html)

But most U.S. nuclear energy industry executives are wary of both approaches to thorium, saying that neither utilities nor investors are eager to gamble on an unfamiliar technology. “Customers are telling us, ‘Let’s focus on taking [financial] risk off the table, not putting it back on,’ ” said Chris Mowry, president and chief executive of Babcock & Wilcox, a Lynchburg-based firm that is building smaller reactors fueled by uranium. “We view [thorium] as something that’s down the road. It’s more of the science-project phase.”

#### No one will invest

Yurman, 12 – energy consultant (Dan, 8/24. “LWR SMRs have fuel advantages.” http://theenergycollective.com/dan-yurman/106276/lwr-smrs-have-fuel-advantages?utm\_source=feedburnerandutm\_medium=emailandutm\_campaign=The+Energy+Collective+%28all+posts%29)

The standard answer to the question of why hasn’t anyone built a thorium fuel SMR is that no customer has expressed an interest in buying one. Digging deeper into that question, you come up with the issue of competitive advantage. What is in it for a customer to go down the path of an entirely different fuel type? Consider the fact that it would need a completely new fuel cycle, with billions spent on facilities to make the fuel that would be needed to run a fleet of thorium fueled reactors. No one is going to build just one. Then there is the question of whether a utility could have any certainty that it could operate them at a profit. For now the risks and the unknowns are too great for any commercial utility to get involved with anything other than uranium fuel. Any company or country developing a thorium fueled reactor has to address the issues of cost competitiveness as a very high priority. Advocates of thorium reactors have for the most part talked about technology differentiation and also nonproliferation advantages. Unless commercial utilities see a compelling business case for them, e.g. lower total cost of operations v. $6/Mbtu natural gas, there are likely to be few takers in next few years.

### 2NC Prefer Our Evidence

#### Prefer our evidence – benefits are overstated

Halper, 12 – The Guardian (Mark, 9/13. “Benefits of thorium as alternative nuclear fuel are 'overstated'.” http://m.guardian.co.uk/environment/2012/sep/13/thorium-alternative-nuclear-fuel-overstated?cat=environmentandtype=article)

The benefits of an alternative nuclear fuel that could offer a safer and more abundant alternative to the uranium that powers conventional reactors have been "overstated", according a new government report on the potential of thorium. The report says the UK should continue to be engaged with the technology but downplays claims by thorium proponents who say that the radioactive chemical element makes it impossible to build a bomb from nuclear waste, leaves less hazardous waste than uranium reactors, and that it runs more efficiently. "Thorium has theoretical advantages regarding sustainability, reducing radiotoxicity and reducing proliferation risk," states the report, prepared for the Department of Energy and Climate Change by the National Nuclear Laboratory (NNL). "While there is some justification for these benefits, they are often overstated."

#### Framing issue—their evidence is from an insular group of thorium nuts who think the tech is viable because of small-scale tests—none of that proves commercialization is possible

Tickell, 12 – founding partner of Oxford Climate Associates and a member of the Oxford Geoengineering Institute; MA from Oxford University (Oliver, April/May. “Thorium: Not ‘green’, not ‘viable’, and not likely.” http://www.jonathonporritt.com/sites/default/files/users/Thorium%20briefing%20FINAL%203.7.12.pdf)

Claim: the technology is already proven.

Response: important elements of the LFTR technology were proven during the 1970s Molten Salt Breeder Reactor (MSBR) at Oak Ridge National Laboratory. However, this was a small research reactor rated at just 7MW and there are huge technical and engineering challenges in scaling up this experimental design to make a 'production' reactor. Specific challenges include:  developing materials that can both resist corrosion by liquid fluoride salts including diverse fission products, and withstand decades of intense neutron radiation;  scaling up fuel reprocessing techniques to deal safely and reliably with large volumes of highly radioactive material at very high temperature;  keeping radioactive releases from the reprocessing operation to an acceptably low level;  achieving a full understanding of the thorium fuel cycle

#### Their ev is from unrealistic fanatics – costs outweigh the benefits

Washington Post, 12 (Eric Niiler, 2/20. “Nuclear power entrepreneurs push thorium as a fuel.” http://www.washingtonpost.com/national/health-science/nuclear-power-entrepreneurs-push-thorium-as-a-fuel/2011/12/15/gIQALTinPR\_story\_2.html)

“There are small boatloads of fanatics on thorium that don’t see the downsides,” said Dan Ingersoll, senior project manager for nuclear technology at the Oak Ridge National Laboratory in Tennessee. For one thing, he said, it would be too expensive to replace or convert the nuclear power plants already running in this country: “A thorium-based fuel cycle has some advantages, but it’s not compelling for infrastructure and investments.” He also pointed out that thorium would still have some radioactive byproducts — just not as much as uranium and not as long-lived — and that there is no ready stockpile of thorium in the United States. It would have to be mined. Overall, he says the benefits don’t outweigh the huge costs of switching technologies. “I’m looking for something compelling enough to trash billions of dollars of infrastructure that we have already and I don’t see that.”

### Nuclear Power – 2NC

#### Group the link debate –

#### Nuclear power drives up electricity prices – rising construction costs and lower efficiency ratings compared to renewable guarantee higher prices – that’s Cooper. All of those costs get directly placed on ratepayers, not the company. Prefer our evidence – it’s from an economic analyst. All of their evidence is from the nuclear industry that are bias and have an incentive to lie.

#### Super expensive

Tickell, 12 – founding partner of Oxford Climate Associates and a member of the Oxford Geoengineering Institute; MA from Oxford University (Oliver, April/May. “Thorium: Not ‘green’, not ‘viable’, and not likely.” http://www.jonathonporritt.com/sites/default/files/users/Thorium%20briefing%20FINAL%203.7.12.pdf)

4.3 Thorium and LFTRs – investment outlook

The development of thorium / LFTR technologies represents a poor investment for national governments, utilities and private investors given:  the marginal benefits to be derived from using thorium fuels in existing reactor designs;  the very long-term nature of any benefit that may be realised from LFTRs, of the order of half a century;  the uncertainty as to whether the very significant technical challenges of the LFTR will ever be overcome;  the possibility that the materials used for reactor construction may degrade more rapidly than anticipated, causing early shut-down;  the likely very high cost of LFTR electricity – especially when compared against the anticipated low future cost of electricity from renewable sources, solar in particular, over the applicable time frame.

#### Link outweighs the link turn – even failed projects jack up the price

Madsen et al 9 (Travis, Analyst @ Frontier Group and Maryland PIRG Foundation, Johanna Neumann @ Maryland PIRG Foundation, and Emily Rusch @ CalPIRG Education Fund, "The High Cost of Nuclear Power," http://www.nirs.org/nukerelapse/calvert/highcostnpower\_mdpirg.pdf)

N o power company has successfully ¶ ordered a nuclear reactor in the ¶ United States since 1973. Despite¶ promises of power that would be “too ¶ cheap to meter,” the last generation of ¶ nuclear reactors ran aground on skyrocketing construction costs. Of 75 nuclear¶ reactors completed between 1966 and¶ 1986, the average reactor cost more than¶ triple its original construction budget.¶ 1¶ Later-built reactors came in as much ¶ as 1,200 percent over-budget.¶ 2¶ In 1985,¶ Forbes magazine wrote that “the failure ¶ of the U.S. nuclear power program ranks ¶ as the largest managerial disaster in business history, a disaster on a monumental ¶ scale.”¶ 3¶ Electricity customers ended up paying¶ the price. Only one-half of the reactors¶ proposed were ever built, and ratepayers ¶ often had to bear the costs of abandoned ¶ projects. Where reactor projects were¶ completed, rates often increased. Finally,¶ during the restructuring of the electricity ¶ industry in the 1990s, ratepayers were¶ saddled with billions in “stranded costs” ¶ from failed investments in nuclear power, ¶ saving nuclear power plant owners (and¶ their shareholders) from huge losses.

#### Nuclear power triples the cost that consumers pay

Madsen et al 9 (Travis, Analyst @ Frontier Group and Maryland PIRG Foundation, Johanna Neumann @ Maryland PIRG Foundation, and Emily Rusch @ CalPIRG Education Fund, "The High Cost of Nuclear Power," http://www.nirs.org/nukerelapse/calvert/highcostnpower\_mdpirg.pdf)

Compounding the problem are the¶ high cost estimates for new nuclear ¶ reactors. Some estimates of the cost of ¶ power from a new nuclear reactor range ¶ as high as 25 to 30 cents per kWh –¶ triple electricity rates in most parts of ¶ the country.¶ 57¶ Adding power at even half ¶ this price to a service territory could ¶ increase the cost that consumers pay for ¶ electricity, motivating additional efforts ¶ to conserve and dampening the power ¶ demand the plant was built to serve.¶ This exact situation contributed to ¶ the failure of the last wave of nuclear ¶ power plant construction in the United ¶ States. Dozens of reactors were cancelled, and billions of dollars in unnecessary investment were lost.

#### Nuclear power displaces the low prices of natural gas – causes spikes in consumers rate

Niemeyer 3/6/12 (Kyle, science writer for Ars Technica. He has B.S. and M.S. degrees in Aerospace Engineering from Case Western Reserve University, and is currently a Ph.D. candidate focusing on combustion modeling, "Chain reaction: the (slow) revival of US nuclear power," http://arstechnica.com/science/2012/03/chain-reaction-the-slow-revival-of-us-nuclear-power/)

Proponents for greater use of nuclear power often tout its low cost and zero emissions. According to the US Energy Information Administration, electricity from nuclear power will cost 11.39 cents per kilowatt hour (kWh) in 2016. By comparison, conventional coal plants would generate electricity at 9.5 cents per kWh and onshore wind at 9.7 cents per kWh. Advanced natural gas plants offer by far the lowest cost at 6.6 cents per kWh.¶ However, it isn’t the cost of electricity that’s the problem. The largest barrier to more nuclear power plants may be the initial cost of construction. According to the report, the capital cost of nuclear plants always escalated over original estimates. The final costs of plants built through 1980—meaning all of them, since only one has been built since 1978—were on average 50 percent higher than comparable coal plants. This even includes retrofits to the coal plants to meet the higher emissions standards of the Clean Air Act.¶ Comparison of electricity costs from nuclear, coal, and gas from different studies.¶ Wikimedia Commons¶ Cost escalation remains an issue. A group of companies announced a two-reactor project in Texas in 2006, with an estimated cost of $5.2 billion. Three years later, the cost was revised to $10 billion, then $13 billion a few weeks later. The final estimate eventually reached $18.2 billion, over three times the original estimate. That's more expensive than an equivalently-sized natural gas plants, which also wouldn’t take nearly as long to build.¶ Considering the increasingly low price of electricity from natural gas, the report emphasized the need for some sort of carbon pricing to make nuclear attractive. Natural gas power plants are beginning to replace coal plants and they emit about half the greenhouse gases. Without a price on carbon dioxide emissions, nuclear power is actually more expensive than coal, oil, or natural gas, due to the massive upfront cost.

### Nuclear Power – Must Read – A2: Just Use Natural Gas/Link Turn

#### High prices of nuclear power means investors will pass on low natural gas prices in order to maximize profit – the costs gets put on taxpayers because of advanced cost recovery

Cooper 3/19/12 (Mark, Senior Fellow for Economic Analysis, Institute for Energy and the Environment - Vermont Law School, "Nuclear Power," http://iowa.sierraclub.org/Nuclear/nuclearhome.htm)

The effort by the Senate Commerce Committee to put a consumer protection band aid over a high caliber bullet hole in the heart of traditional ratepayer protection only makes the absurdity of the early cost recovery for nuclear reactors even more apparent.¶ Because the bill removes nuclear power from “traditional ratemaking principles or traditional cost recovery mechanisms,” consumer bills will increase dramatically. As passed out of Committee:¶ · Mid-American customers will be forced to pay for nuclear reactors long before they produce any electricity with no hope of recovering those prepayments should the reactors not be completed.¶ · The IUB is not allowed to reject the utility-determined level of prepayments because there are less costly alternatives available.¶ · Although the risk of building and operating a nuclear reactor is shifted to ratepayers, the utility is guaranteed a rate of return that will be higher than it earns on other projects.¶ This mismatch of risk and reward gives the utility strong incentives to maximize profits at the expense of ratepayers and strips the Utility Board of the powers necessary to protect ratepayers. Notwithstanding the amendments, the harmful effects identified by the Staff of the Utility Board in the original bill are still in place.¶ · By conferring a special advantage on nuclear, it threatens to distort the utility and regulatory decision making process and gives utilities an incentive to choose investments and make construction decisions that harm ratepayers.¶ · Beyond the initial choice of projects, shifting the risk of nuclear reactor construction onto the backs of ratepayers creates an ongoing problem because it diminishes the incentive to drive a hard bargain with vendors that protects ratepayers or recover costs from joint owners.¶ · By excusing nuclear reactors from rigorous comparative analysis of alternatives, it all but guarantees less costly alternatives will be passed over.¶ · Because nuclear reactors are so risky and impossible to finance in normal capital market, the utilities are pushing for advanced and guaranteed recovery of all costs, but certainty denies regulators the flexibility that is needed in an uncertain and rapidly changing environment and ties the hands of the IUB in its efforts to balance the interest of ratepayers and utility shareholders.¶ · The need to accelerate cost recovery creates severe intergenerational inequities in cost recovery, violating the fundamental principle that those who consume the output of a plant should bear its costs.¶ · Having guaranteed utilities cost recovery on an annual basis, the IUB will be under greater pressure to approve “incremental” additions to cost even when those costs are the result of utility error.¶ In its press release, MidAmerican trumpets the fact that “MidAmerican Energy Iowa’s electric customers have enjoyed stable base electricity rates for 16 years” and takes credit for that accomplishment. It conveniently ignores the important role that traditional ratemaking principles and traditional cost recovery mechanism have played in ensuring utilities deliver least cost power. By excusing the most risky, high cost options available today from those principles, this bill destroys the consumer protections that have produced stable rates in the past. The inevitable result will be that the future rates paid by MidAmerican electricity customers will be higher than they could and should be.

### Econ Impact – 2NC

#### Impact outweighs and turns the case –

#### A. Magnitude – US collapse goes global and draws in every major country – treaties increase the probability of draw in and guarantees escalation.

#### B. Timeframe – decline causes lash out and outward pressure to secure economic gains – that’s Auslin.

### Econ Collapse = War

#### Decline cause miscalculation and conflict – prefer statistically significant evidence

**Royal 10** (Jedediah, Director of Cooperative Threat Reduction – U.S. Department of Defense, “Economic Integration, Economic Signaling and the Problem of Economic Crises”, Economics of War and Peace: Economic, Legal and Political Perspectives, Ed. Goldsmith and Brauer, p. 213-215)

Less intuitive is how periods of economic decline may increase the likelihood of external conflict. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson's (1996) work on leadership cycle theory, finding that rhythms in the global economy are associated with the rise and fall of a pre-eminent power and the often bloody transition from one pre-eminent leader to the next. As such, exogenous shocks such as economic crises could usher in a redistribution of relative power (see also Gilpin. 1981) that leads to uncertainty about power balances, increasing the risk of miscalculation (Feaver, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner. 1999). Separately, Pollins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland's (1996, 2000) theory of trade expectations suggests that 'future expectation of trade' is a significant variable in understanding economic conditions and security behaviour of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However, if the expectations of future trade decline, particularly for difficult to replace items such as energy resources, the likelihood for conflict increases**,** as states will be inclined to use force to gain access to those resources. Crises could potentially be the trigger for decreased trade expectations either on its own or because it triggers protectionist moves by interdependent states.4 Third, others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict, particularlyduring periods of economic downturn. They write: The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other. (Blomberg & Hess, 2002. p. 89) Economic decline has also been linked with an increase in the likelihood of terrorism (Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government. "Diversionary theory" suggests that, when facing unpopularity arising from economic decline, sitting governments have increased incentives to fabricate externalmilitary conflicts to create a 'rally around the flag' effect. Wang (1996), DeRouen (1995). and Blomberg, Hess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that periods of weak economic performance in the United States, and thus weak Presidential popularity, are statistically linked to an increase in theuse of force. In summary, recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas political science scholarship links economic decline with external conflictat systemic, dyadic and national levels.5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic-security debate and deserves more attention.

#### Economic collapse causes extinction

**Bearden 00** (T.E., Director of Association of Distinguished American Scientists, The Unnecessary Energy Crisis: How to Solve It Quickly,” Space Energy Access Systems, http://www.seaspower.com/EnergyCrisis-Bearden.htm)

History bears out that desperate nations take desperate actions. Prior to the final economic collapse, the stress on nations will have increased the intensity and number of their conflicts, to the point where the arsenals of weapons of mass destruction (WMD) now possessed by some 25 nations, are almost certain to be released.  As an example, suppose a starving North Korea launches nuclear weapons upon Japan and South Korea, including U.S. forces there, in a spasmodic suicidal response. Or suppose a desperate China — whose long-range nuclear missiles (some) can reach the United States — attacks Taiwan. In addition to immediate responses, the mutual treaties involved in such scenarios will quickly draw other nations into the conflict, escalating it significantly. Strategic nuclear studies have shown for decades that, under such extreme stress conditions, once a few nukes are launched, adversaries and potential adversaries are then compelled to launch on perception of preparations by one's adversary.  The real legacy of the MAD concept is this side of the MAD coin that is almost never discussed. Without effective defense, the only chance a nation has to survive at all is to launch immediate full-bore pre-emptive strikes and try to take out its perceived foes as rapidly and massively as possible. As the studies showed, rapid escalation to full WMD exchange occurs. Today, a great percent of the WMD arsenals that will be unleashed, are already on site within the United States itself. The resulting great Armageddon will destroy civilization as we know it, and perhaps most of the biosphere, at least for many decades.

#### Growth solves war – econometric studies prove

**Hupreys 03** (Macartan Huphreys is a Associate Professor, Department of Political Science, Columbia University And Director, Center for the Study of Development Strategies Feb 2003 “Economics and Violent Conflict” http://www.unglobalcompact.org/docs/issues\_doc/Peace\_and\_Business/Economics\_and\_Violent\_Conflict.pdf)

One might expect rich nations to be more violent than poor ones because the rich ones have more to fight over. 10 The econometric evidence however suggests the opposite. Most research shows that wealth reduces the likelihood of civil war, 11 and that economic growth also reduces risks while recessions worsen them. Figures derived from World Bank econometric models (Figure 1) show a striking relationship between the wealth of a nation and its chances of having a civil war. 12 The figure suggests that differences in wealth are most relevant among poorer countries. A country with GDP per person of just $250 has a predicted probability of war onset (at some point over the next five years) of 15%, even if it is otherwise considered an “average” country. This probability of war reduces by half for a country with GDP of just $600 per person and is reduced by half again to below 4% for a country with income of $1250. Countries with income per person over $5000 have a less than 1% chance of experiencing civil conflicts, all else being equal. There are various explanations for why this is so. But so far little work has been undertaken to distinguish between them. The most common is that wealthier societies are better able to protect assets, thus making violence less attractive for would-be rebels. 13 Another explanation, given by political scientist Thomas Homer Dixon argues that poverty causes violence, and points to cases where scarcity leads to migrations that result in conflicts between identity groups over resources. Alternatively, the relationship could be spurious in the sense that there are other features of a country, such as a democratic culture, that make it at once more prosperous and less violent. And causality may in fact run in the opposite direction: rich countries may be rich in part because they have had little civil conflict in their recent past. 14 Whatever the reason, the figures suggest that growth oriented initiatives and conflict prevention initiatives are mutually reinforcing. And the figures provide a rationale for those who say that it is in the interest of wealthy nations to promote economic growth in poor countries in order to avoid the spillover effects of likely conflicts there. In terms of policy implications, the analysis suggests that the greatest gains in conflict prevention are to be made by focusing development efforts on the very poor rather than on countries of intermediate wealth.

#### Growth solves conflict

**Marquardt 5** (Michael J., Professor of Human Resource Development and International Affairs, George Washington University, Globalization: The Pathway to Prosperity, Freedom and Peace,” Human Resource Development International, March 2005, Volume 8, Number 1, pg. 127-129)

Perhaps the greatest value of globalization is its potential for creating a world of peace. Economic growth has been identiﬁed as one of the strongest forces that turn people away from conﬂict and wars among groups, tribes, and nations. Global companies strongly discourage governments from warring against countries in which they have investments. Focusing on economic growth encourages cooperation and living in relative peace (Marquardt, 2001, 2002).

### Turns Nuclear Power

#### Econ decline tanks nuke power – undermines necessary investment

Simpson 9 (Fiona, associate director of New York University's Center on International Cooperation, Bulletin of Atomic Scientists, "The recession alone won't stop nuclear power's growth," http://www.thebulletin.org/web-edition/features/the-recession-alone-wont-stop-nuclear-powers-growth)

None of the IAEA's projections, however, account for the financial crisis, which may negatively impact the appeal of nuclear energy. Clearly, investors that need credit to build new nuclear plants face a great deal more uncertainty and difficulty securing financing. Such a situation, on the surface, would indicate that nuclear power will be less attractive to investors. The downturn also may reduce electricity demand and thus, potentially, make the need for new power plants less urgent.¶ At the same time, prices for natural gas and oil have fallen from earlier highs, increasing their attractiveness as energy sources (although the price of each has increased recently). Additionally, nuclear power plants have significant "front-loaded" costs, requiring much more investment at the outset than fossil-fuel burning plants, even if nuclear plants may eventually be cheaper to run. In light of the ongoing credit crunch, investors in countries that don't rely on state-owned enterprises may find the economic circumstances simply too difficult to justify an investment in nuclear power--especially if there's reliable (and domestic) access to natural gas, coal, or oil. One also would expect private lenders to shy from nuclear projects--both because they have less money to lend and because of nuclear power's history of cost overruns and delays. Finally, from the point of view of developing countries interested in nuclear power, multilateral development banks, such as the World Bank, tend to prohibit investment in new nuclear projects.

#### Econ decline hurts nuke power – kills investment

Carrington 12 (Damian, The Guardian, "Energy companies blame abandonment of nuclear plans on lack of cash," http://www.guardian.co.uk/environment/2012/may/15/energy-companies-abandonment-nuclear-plans)

Investing billions in new nuclear power stations would have forced a credit-rating downgrade on energy giant RWE, the company's chief executive has revealed. The head of another big six energy company, E.ON, blamed the abandonment of its nuclear plans on a lack of "financial firepower".¶ Tuesday's developments are the latest to demonstrate that the huge cost and decades-long payback times of new nuclear power stations are making them difficult to fund in the current economic crisis. RWE and E.ON cancelled their joint plan to build new reactors in March, while nuclear giant EDF has delayed work at its site at Hinkley and EDF's nuclear partner Centrica says the case for nuclear investment is "unproven".

### Turns Space

#### Economic decline prevents space exploration

**Elhefnawy, ‘8** – Nader, B.A. in IR, frequent writer on international affairs, national security and space issues, contributor to the Space Review ( “Economic growth and space development over the long haul”. June 23. The Space Review. [http://www.thespacereview.com/article/1220/1](http://www.thespacereview.com/article/1156/1))

No less important is the expansion of the economic base that would have to support such endeavors, a point which rarely gets much attention. There is an obvious reason why that approach is often ignored: the common claim that the limits to growth on Earth mandate a turn to the exploitation of space. (Such arguments are not exclusive to the writers of the 1970s. John S. Lewis posits that the failure to do so will mean “civilization collapses to subsistence agriculture by 2030” in his 1996 book Mining the Sky.) However, this is far from being the only reason. The plain truth is that relying on terrestrial economic expansion to endow us with the resources for eventual space expansion will mean admitting the most exciting things are further off than we would like, outside the time frame of “meaningful” discussions of what public policy should be or what private business can do. Besides, it makes for a less compelling and attractive story than the idea of a technological revolution just over the horizon that opens up the heavens to all of us—especially if one is a market romantic when it comes to these matters (see “Market romanticism and the outlook for private space development”, The Space Review, September 2, 2008). Nonetheless, that is what one would have to assume given the state of the art. Additionally, however, while space launch costs (and other, related costs) may drop in real terms in the coming decades, it is safe to say that any viable future spacefaring society will also see them drop markedly in relative terms. The United Nations predicts the rise of Gross World Product (GWP) to about $140 trillion by 2050, more than twice today’s level, and this is still rather conservative next to some previous periods of comparable length. A repeat of the growth of 1950–1990, for instance, would likely result in a GWP in the $250–350 trillion range. And of course, if one goes in for that sort of thinking, the growth we could realize if the predictions of futurists like Ray Kurzweil pan out would absolutely explode those numbers. Of course, some caution is in order. Given the challenges the world now faces, including tight energy supplies, ecological degradation, and financial instability (and the huge uncertainties involved in not just space, but other technologies like molecular engineering and robotics), it is easy to picture even the modest numbers supplied by the UN proving overoptimistic. Additionally, even if these levels of income actually are attained (and the possibility is certainly worth considering), one should not get carried away in fantasizing about their significance. Joseph Schumpeter once considered the prospect of a per capita U.S. GDP of $1300 ($16,700 in today’s dollars) in 1978. It seemed obvious to him that at such a level of income: all the desiderata that have so far been espoused by any social reformers—practically without exception, including even the greater part of the cranks—either would be fulfilled automatically or could be fulfilled without significant interference with the capitalist process. Put more plainly, he argued that “this would do away with anything that according to present standards could be called poverty, even in the lowest strata of the population.” Schumpeter’s scenario was both overly pessimistic, and overly optimistic. As it turned out, the US economy grew far more rapidly than that. By 1978 America’s per capita GDP was about fifty percent higher than in his prediction, some $25,000. However, the utopian results he described did not come about. Indeed, it is worth noting that Botswana and Estonia today meet the level of economic development he described. No one considers either of those countries to be anything close to “poverty-free”. This danger of overestimating the significance of a given level of income certainly carries over to discussions of how large a space program a country (or the international community as a whole) can afford. US GDP in 1970 was roughly forty percent what it is today, but the NASA budget is actually a little smaller. Clearly, growth alone (at least as conventionally measured) did not suffice to fund a more ambitious space program. Nonetheless, even if one should not get carried away by seemingly staggering numbers, the fact of higher output still means an enlarged range of options. Just as China’s economic growth has made its new ambitions in space more than just a dream (even if many of its plans have yet to prove to be realistic), a space project of any given size would seem far more affordable in a world where global wealth had risen by a factor of two, three, or five. This will especially be the case if all that growth has developed along with fiscal sanity, poverty reduction, and better resource management—the failure to achieve which has been the Achilles’ heel of growth in recent decades. (To give just one example, the net financial liabilities of the Group of Seven industrial countries quadrupled as a share of their GDP between 1974 and 2006, tightening their budgets even as their economies got much bigger, according to the Canadian Ministry of Finance.) In the end, rather than banking on space as a way out of Earth’s short-run problems, solving those problems here on Earth, with the resources at hand, is likely to be crucial to meeting the long-run demands of space flight.

### 2NC Overview

#### K outweighs the case

#### -- Magnitude -- logic of security created the most destructive features of the international system -- war, oppression, and ecological destruction are all inevitable when particular decisions become necessities. Try or die -- voting aff makes their impacts inevitable.

#### -- Turns case -- securitized energy policy ensures benefits for the elites while marginalizing general populations -- means we can't accrue the benefits of increased production and causes backlash from those whose lands are being destroyed from the new projects.

#### -- Independent impact -- ethnic minorities and indigenous people will bear the brunt of the environmental and social costs of the plan -- resource exploitation increases the propensity for civil strife and massively exacerbates inequality and ecological destruction. These impacts must be examined prior to discussion of the real-world implications of the plan.

#### -- Alt' solves case -- rejecting dominant political discourse challenges the root cause of violent identity construction, undermining the solar reason for war. It's a prerequisite to better policy-making and a matter of sequencing -- good theory now causes better action later.

### AT Framework – Short

#### **-- Counter interpretation – aff must defend their discourse. The judge is a specific intellectual challengning the values and assumptions of the 1AC.**

#### -- Our form of education outweighs – we are educators not policy-makers – we all take government classes to learn about the policy-making process – individuals must be able to point out the weak spot in dominant narratives.

#### -- Cost-benefit analysis – aff gets strategic gains from reading hyperbolic impact scenarios -- cost is that they should have to defend the desirability of how their represent those impacts.

#### -- Coherence – only incorporation of representations can make sense of political reality

Jourde 6 – Cedric Jourde \* Ph.D., Political Science, University of Wisconsin-Madison, Madison, 2002 \* M.A., Political Science, University of Wisconsin-Madison, Madison, 1996 \* B.Sc., Political Science, Université de Montréal, Montréal, 1995 Hegemony or Empire?: The redefinition of US Power under George W Bush Ed. David and Grondin p. 182-3 2006

Relations between states are, at least in part, constructed upon representations. Representations are **interpretative prisms** through which decision-makers **make sense of a political reality**, through which they define and assign **a subjective value** to the other states and non-state actors of the international system, and through which they determine **what are significant** international political **issues**.2 For instance, officials of a given state will represent other states as 'allies', 'rivals', or simply 'insignificant', thus assigning a subjective value to these states. Such subjective categorizations often derive from representations of these states' domestic politics, which can for instance be perceived as 'unstable\*, 'prosperous', or 'ethnically divided'. It must be clear that representations are **not objective** or truthful depictions of reality; rather they are subjective and political ways of seeing the world, making certain things 'seen' by and significant for an actor while making other things 'unseen' and 'insignificant'.3 In other words, they are founded on each actor's and group of actors' cognitive, cultural-social, and emotional standpoints. Being fundamentally political, representations are the object of tense struggles and tensions, as some actors or groups of actors can impose on others their own representations of the world, of what they consider to be appropriate political orders, or appropriate economic relations, while others may in turn accept, subvert or contest these representations. Representations of a foreign political reality influence how decision-making actors will act upon that reality. In other words, as subjective and politically infused interpretations of reality, representations **constrain and enable** the policies that decision-makers will adopt vis-a-vis other states; they limit the courses of action that are **politically thinkable** and imaginable, making certain policies conceivable while relegating other policies to the realm of the unthinkable.4 Accordingly, identifying how a state represents another state or non-state actor **helps to understand how and why certain foreign policies have been adopted while other policies have been excluded**. To take a now famous example, if a transnational organization is represented as a group of 'freedom fighters', such as the multi-national mujahideen in Afghanistan in the 1980s, then military cooperation is conceivable with that organization; if on the other hand the same organization is represented as a 'terrorist network', such as Al-Qaida, then military cooperation as a policy is simply not an option. In sum. the way in which one sees, interprets and imagines the 'other\* delineates the course of action one will adopt in order to deal with this 'other'.

#### -- Kritik proper is offense – means their interpretation excludes vital discussions that implicate how the plan is enacted – at worst we turn case

### 2NC Energy Security

#### Energy security enables panoptic politics that pervade all aspects of daily lives

Ciuta 10 -- Lecturer in International Relations and Director of the Centre of European Politics, School of Slavonic and East European Studies @ University College London, UK (Felix, 2010, "Conceptual Notes on Energy Security: Total or Banal Security?" Security Dialogue 41(123), Sage)

At first glance, to state that energy ‘pervades every aspect of life’ (Ocheltree, 2008: 1) is commonsensical and seems unproblematic in security terms. On closer investigation, however, this view of energy has significant consequences. In the most immediate sense, energy modulates security by taking it everywhere, simply because energy is everywhere. This assertion alone – ‘security is everywhere’ – will startle students and practitioners of security, because it challenges one of their most fundamental assumptions: that security has precise boundaries that make it a domain reservé of specialist knowledge and practice (Bigo, 1998; Ciuta˘, 2009). But, what precisely does it mean that energy security is everywhere? To quote one proponent of this view, ‘energy security needs to be extended to the safety of the whole infrastructure and supply chain – recognizing the vulnerabilities that come from terrorism, war, brigandage, and natural disasters’ (Yergin, 2006b: 1). In conceptual terms, this statement identifies an ‘infinite number of targets’ (Kain, 2007) that are subject to an infinite number of vulnerabilities. Energy security means the security of everything: resources, production plants, transportation networks, distribution outlets and even consumption patterns; everywhere: oilfields, pipelines, power plants, gas stations, homes; against everything: resource depletion, global warming, terrorism, ‘them’ and ourselves. At its maximum, this logic invests every single object of any kind with and in security. At least potentially, 90 the result is a panoptic view of security that legitimates panoptic security policies (see Bigo, 1998). It is at this point that the totality of energy intersects and reinforces its reflexivity. Former NATO SACEUR General James L. Jones (2007: 2) might have intended to emphasize only the totality of energy when he argued that energy is ‘a national security issue as well as an international and family security issue’, but his statement draws attention to the potential of energy security to percolate down through to the most minute, banal and intimate aspects of our lives. Families are not only affected by energy security, but also produce energy insecurity – through consumption patterns, for example (Campbell, 2005) – and they can be security providers by the same means. The multiplication of actors signalled by the previous logic is thus pushed to the maximum, because all the myriad of actual and potential actors acquire simultaneously all possible security roles: they are at the same time referent objects, subjects, threats, vectors and agents of security. Thus, the call to broaden security becomes realized in paroxysmic manner. To paraphrase Dillon & Reid (2001: 58), energy security becomes ‘omnidirectional, omnisensorial, omniversal’.

#### That outweighs war

**Burke 2007** lecturer at Adelaide University School of History and Politics, “What security makes possible,” Working Paper 2007 p.11-12

Even if threats are credible and existential, I do not believe that they warrant invoking the ‘state of exception’, which has in our time been more commonly enacted in the detention and rendition of terrorism suspects, immigration detention centres and the use of arbitrary arrest and deportation powers. The ‘state of exception’ also haunts much legial innovation in counter-terrorism policy. And, as Agamben, Judith Butler and Arendt have argued, such approaches have their roots in processes (namely colonialism and the Holocaust) that systematically dehumanized their victims producing lives that were ‘bare’, ‘ungreivable’, ‘unliveable’ and ‘superfluous’. If nothing else, it ought to raise serious doubts as to how securitization theory can be helpful in resignifying security as emancipation. It also precludes the ability to speak of human or environmental security in terms consistent with democratic political processes in a state of normalacy. The existential threat of human beings may be real enough, but it should generate a very different policy logic than outlined by the Copenhagen School. As Rocanne Lynn Doty and Karin Fierke have argued, the Copenhagen School’s conceptualization blocks the path to human security. This would seem to be implicit in the way Waever, in his 1995 article, attempts to provide security with ontological grounding. There he states that ‘as concepts, neither individual nor international security exist’:

### AT Perm – Do Both

#### 1. Cross-apply framework – the aff must prove there’s value in incorporating their discourse and epistemology. Testing competitiveness with the plan is nonsensical because our kritik is about their scholarship.

#### 2. Theory – permutations must include 1AC representations, they’re the majority of the opening speech. Severance makes the aff a moving target and being neg becomes impossible. The aff isn’t selected in a vacuum, they had infinite prep to select advantages they had defenses of.

#### 3. The plan cannot be detached from its discursive underpinnings

Anthony Burke, Senior Lecturer @ School of Politics & IR @ Univ. of New South Wales, ‘7 [*Beyond Security, Ethics and Violence*, p. 3-4]

These frameworks are interrogated at the level both of their theoretical conceptualisation and their practice: in their influence and implementation in specific policy contexts and conflicts in East and Central Asia, the Middle East and the 'war on terror', where their meaning and impact take on greater clarity. This approach is based on a conviction that the meaning of powerful political concepts cannot be abstract or easily universalised: they all have histories, often complex and conflictual; their forms and meanings change over time; and they are developed, refined and deployed in concrete struggles over power, wealth and societal form. While this should not preclude normative debate over how political or ethical concepts should be defined and used, and thus be beneficial or destructive to humanity, it embodies a caution that the meaning of concepts can never be stabilised or unproblematic in practice. Their normative potential must always be considered in relation to their utilisation in systems of political, social and economic power and their consequent worldly effects. Hence this book embodies a caution by Michel Foucault, who warned us about the 'politics of truth . . the battle about the status of truth and the economic and political role it plays', and it is inspired by his call to 'detach the power of truth from the forms of hegemony, social, economic and cultural, within which it operates at the present time'.1

It is clear that traditionally coercive and violent approaches to security and strategy are both still culturally dominant, and politically and ethically suspect. However, the reasons for pursuing a critical analysis **relate not only to the** most destructive or controversial approaches, such as the war in Iraq, **but also to their available** (and generally preferable) alternatives. There is a necessity to question not merely extremist versions such as the Bush doctrine, Indonesian militarism or Israeli expansionism, **but also their mainstream critique**s - whether they take the form **of liberal policy approaches** in international relations (IR), just war theory, US realism, optimistic accounts of globalisation, rhetorics of sensitivity to cultural difference, or centrist Israeli security discourses based on territorial compromise with the Palestinians. The surface appearance of lively (and often significant) debate masks a deeper agreement **about major concepts**, forms of political identity and the imperative to secure them. Debates about when and how it may be effective and legitimate to use military force in tandem with other policy options, for example, mask a more fundamental discursive consensus about the meaning of security, the effectiveness of strategic power, the nature of progress, the value of freedom or the promises of national and cultural identity. As a result, political and intellectual debate about insecurity, violent conflict and global injustice can become hostage to a claustrophic structure of political and ethical possibility that systematically **wards off critique.**

**4. Multiple perms are a VI – no risk option for the aff that demands lots of block time and are impossible to generate offense against, sandbags explanation to the 1AR screwing the neg, ci – they get 1 permutation.**

#### The alt’ is a sequential process that cannot be permuted – injecting a sense of doubt into current politics has to occur before we endorse a specific policy – the plan isn’t offense until they’ve justified their political strategy

Cheeseman and Bruce 96(Graeme Cheeseman, Snr. Lecturer @ New South Wales, and Robert Bruce, 1996, Discourses of Danger & Dread Frontiers, p. 5-9)

This goal is pursued in ways which are still unconventional in the intellectual milieu of international relations in Australia, even though they are gaining influence worldwide as traditional modes of theory and practice are rendered inadequate by global trends that defy comprehension, let alone policy. The inability to give meaning to global changes reflects partly the enclosed, elitist world of profession security analysts and bureaucratic experts, where entry is gained by learning and accepting to speak a particular, exclusionary language. The contributors to this book are familiar with the discourse, but accord no privileged place to its ‘knowledge form as reality’ in debates on defense and security. Indeed, they believe that debate will be furthered only through a long overdue critical re-evaluating of elite perspectives. Pluralistic, democratically-oriented perspectives on Australia’s’ identity are both required and essential if Australia’s thinking on defense and security is to be invigorated. This is not a conventional policy book; nor should it be, in the sense of offering policy-makers and their academic counterparts sets of neat alternative solutions, in familiar language and format, to problems they pose. This expectation is itself a considerable part of the problem to be analyzed. It is, however, a book about policy, one that questions how problems are framed by policy-makers. It challenges the proposition that irreducible bodies of real knowledge on defense and security exist independently of their ‘context in the world’, and it demonstrates how security policy is articulated authoritatively by the elite keepers of that knowledge, experts trained to recognize enduring, universal wisdom. All others, from this perspective, must accept such wisdom to remain outside of the expert domain, tainted by their inability to comply with the ‘rightness’ of the official line. But it is precisely the official line, or at the least its image of the world, that needs to be problematised. If the critic responds directly to the demand for policy alternatives, without addressing this image, he or she is tacitly endorsing it. Before engaging in the policy debate the critics need to reframe the basic terms of reference tradition of democratic dialogue. More immediately, it ignores post-seventeenth century democratic traditions which insist that a good society must have within it some way of critically assessing its knowledge and the decisions based upon that knowledge which impact upon citizens of such a society. This is a tradition with a slightly different connotation in contemporary liberal democracies, which during the Cold War, were proclaimed different and superior to the totalitarian enemy precisely because they were institutional checks and balances upon power. In short, one of the major differences between ‘open societies’ and their (closed) counterparts behind the Iron Curtain was that the former encouraged the critical testing of the knowledge and decisions of the powerful and assessing them against liberal democratic principles. The latter tolerated criticism only on rare and limited occasions. For some, this represented the triumph of rational-scientific methods of inquiry and techniques of falsification. For others, especially since positivism and rationalism have lost much of their allure, it means that for society to become open and liberal, sectors of the population must be independent of the state and free to question its knowledge and power. One must be able to say ‘why’ to power and proclaim ‘no’ to power. Though we do not expect this position to be accepted by every reader, contributors to this book believe that critical dialogue is long overdue in Australia and needs to be listened to. For all its liberal democratic trappings, Australia’s security community continues to invoke closed monological narratives on defense and security. This book also questions the distinctions between policy practice and academic theory that informs conventional accounts of Australian security. One of its major concerns, particularly in chapters 1 and 2, is to illustrate how theory is integral to the practice of security analysis and policy prescription. The book also calls on policy-makers, academics and students of defense and security to think critically about what they are reading, writing and saying; to begin to ask, of their work and study, difficult and searching questions raised in other disciplines; to recognize, no matter how uncomfortable it feels, that what is involved in theory and practice is not the ability to identify a replacement for failed models, but a realization that terms and concepts – state sovereignty, balance of power, security, and so on – are contested and problematic, and that the world is indeterminate, always becoming what is written about it. Critical analysis which shows how particular kinds of theoretical presumptions can effectively exclude vital areas of political life from analysis has direct practical implications for policymakers, academics and citizens who face the daunting task of steering Australia through some potentially choppy international waters over the next few years. There is also much interest in the chapters for those struggling to give meaning to a world where so much that has long been taken for granted now demands imaginative, incisive reappraisal. The contributors, too, have struggled to find meaning, often despairing at the terrible human costs of international violence. This is why readers will find no single, fully formed panacea for the world’s ills in general, or Australia’s security in particular. There are none. Ever chapter, however in its own way, offers something more than is found in orthodox literature, often by exposing ritualistic Cold War defense and security mind-sets that are dressed up as new thinking. Chapters 7 and 9, for example, present alternative ways of engaging in security and defense practice. Others (chapters 3, 4, 5, 6, and 8) seek to alert policymakers, academics and students to alternative theoretical possibilities that might better serve an Australian community pursuing security and prosperity in an uncertain world. All chapters confront the policy community and its counterparts in the academy with a deep awareness of the intellectual and material constraints imposed by dominant traditions of realism, but they avoid dismissive and exclusionary terms which often in the past characterized exchanges between policy-makers and their critics. This is because, as noted earlier, attention needs to be paid to the words and the thought process of those being criticized. A close reading of this kind draws attention to underlying assumptions, showing they need to be recognized and questioned. A sense of doubt (in place of confident certainty) is a necessary prelude to a genuine search for alternative policies. First comes an awareness of the need for new perspectives, then specific polices may follow. As Jim George argues in the following chapter, we need to look not as much at contending policies as they are made for us but challenging ‘the discursive process which gives [favored interpretations of “reality”] their meaning and which direct [Australia’s] policy/analytical/ military responses’. This process is not restricted to the small, official defense and security establishment huddled around the US-Australian War Memorial in Canberra. It also encompasses much of Australia’s academic defense and security community located primarily though not exclusively within the Australian National University and the University College of the University of New South Wales. These discursive processes are examined in detail in subsequent chapters as authors attempt to make sense of a politics of exclusion and closure which exercises disciplinary power over Australia’s security community. They also question the discourse of ‘regional security’, ‘security cooperation’, ‘peacekeeping’ and ‘alliance politics’ that are central to Australia’s official and academic security agenda in the 1990s. This is seen as an important task especially when, as it revealed, the disciplines of International Relations and Strategic Studies are under challenge from critical and theoretical debates ranging across the social sciences and humanities; debates that are nowhere to be found in Australian defense and security studies. The chapters graphically illustrate how Australia’s public policies on defense and security are informed, underpinned, and. This book, then, reflects and underlines the importance of Antonio Gramsci and Edward Said’s ‘critical intellectuals’. The demand, tacit or otherwise, that the policy maker’s frame of reference be accepted as the only basis for discussion and analysis ignores a three thousand year old tradition commonly associated with Socrates and purportedly integral to the Western legitimized by a narrowly-based intellectual enterprise which draws strength from contested concepts of realism and liberalism, which in turn seek legitimacy through policy-making processes. Contributors ask whether Australia’s policy-makers and their academic advisers are unaware of broader intellectual debates. Or resistant to them, or choose not to understand them, and why? To summarize: a central concern of this book is to democratize the defense and security theory/practice process in Australia so that restrictions on debate can be understood and resisted. This is a crucial enterprise in an analytical/ policy environment dominated by particularly rigid variants of realism which have become so powerful and unreflective that they are no longer recognized simply as particular ways of constituting the world, but as descriptions of the real-as reality itself. The consequences of this (silenced) theory-as-practice may be viewed every day in the poignant, distressing monuments to analytical/policy metooism at the Australian (Imperial) War Memorial in Canberra and the many other monuments to young Australians in towns and cities around the country. These are the flesh and blood installments of an insurance policy strategy which, tragically, remains integral to Australian realism, despite claims of a new mature independent identity in the 1990s. This is what unfortunately, continues to be at stake in the potentially deadly debates over defense and security revealed in this book. For this reason alone, it should be regarded as a positive and constructive contribution to debate by those who are the targets of its criticisms.

**Embedded in their 1ac discourse –**

### Weber St LFTR’s – Warming / Space Col

#### It’s embedded in their discourse

#### Eco-apathy –

#### Lewandowsky and Ashley say "We can calculate the effect, and predict what is going to happen" – this cold calculation

#### This technological enframing makes warming strategically even more dangerous.

**Crist ‘7** – Ass. Prof. Sci & Tech in Society @ VT (Eileen, Telos 141, Winter, Beyond the Climate Crisis)

While the dangers of climate change are real, I argue that there are **even greater dangers** in representing it as the most urgent problem we face. Framing climate change in such a manner deserves to be challenged for two reasons: it encourages the restriction of proposed solutions to the technical realm, by powerfully insinuating that the needed approaches are those that directly address the problem; and it detracts attention from the planet’s ecological predicament as a whole, by virtue of claiming the limelight for the one issue that trumps all others. Identifying climate change as the biggest threat to civilization, and ushering it into center stage as the highest priority problem, has bolstered the proliferation of technical proposals that address the specific challenge. The race is on for figuring out what technologies, or portfolio thereof, will solve “the problem.” Whether the call is for reviving nuclear power, boosting the installation of wind turbines, using a variety of renewable energy sources, increasing the efficiency of fossil-fuel use, developing carbon-sequestering technologies, or placing mirrors in space to deflect the sun’s rays, the narrow character of such proposals is evident: confront the problem of greenhouse gas emissions by technologically phasing them out, superseding them, capturing them, or mitigating their heating effects. In his The Revenge of Gaia, for example, Lovelock briefly mentions the need to face climate change by “changing our whole style of living.”16 But the thrust of this work, what readers and policy-makers come away with, is his repeated and strident call for investing in nuclear energy as, in his words, “the one lifeline we can use immediately.”17 In the policy realm, the first step toward the technological fix for global warming is often identified with implementing the Kyoto protocol. Biologist Tim Flannery agitates for the treaty, comparing the need for its successful endorsement to that of the Montreal protocol that phased out the ozone-depleting CFCs. “The Montreal protocol,” he submits, “marks a signal moment in human societal development, representing the first ever victory by humanity over a global pollution problem.”18 He hopes for a similar victory for the global climate-change problem. Yet the deepening realization of the threat of climate change, virtually in the wake of stratospheric ozone depletion, also suggests that dealing with global problems treaty-by-treaty is no solution to the planet’s predicament. Just as the risks of unanticipated ozone depletion have been followed by the dangers of a long underappreciated climate crisis, so it would be naïve not to anticipate another (perhaps even entirely unforeseeable) catastrophe arising after the (hoped-for) resolution of the above two. Furthermore, if greenhouse gases were restricted successfully by means of technological shifts and innovations, the **root cause** of the ecological crisis as a whole would remain unaddressed. The destructive patterns of production, trade, extraction, land-use, waste proliferation, and consumption, coupled with population growth, would go unchallenged, continuing to run down the integrity, beauty, and biological richness of the Earth. Industrial-consumer civilization has entrenched a form of life that admits virtually no limits to its expansiveness within, and perceived entitlement to, the entire planet.19 But questioning this civilization is by and large sidestepped in climate-change discourse, with its single-minded quest for a global-warming techno-fix.20 Instead of confronting the forms of social organization that are causing the climate crisis—among numerous other catastrophes—climate-change literature often focuses on how global warming is endangering the culprit, and agonizes over what technological means can save it from impending tipping points.21 The dominant frame of climate change funnels cognitive and pragmatic work toward specifically addressing global warming, while muting a host of equally monumental issues. Climate change looms so huge on the environmental and political agenda today that it has contributed to downplaying other facets of the ecological crisis: mass extinction of species, the devastation of the oceans by industrial fishing, continued old-growth deforestation, topsoil losses and desertification, endocrine disruption, incessant development, and so on, are made to appear secondary and more forgiving by comparison with “dangerous anthropogenic interference” with the climate system. In what follows, I will focus specifically on how climate-change discourse encourages the continued marginalization of the biodiversity crisis—a crisis that has been soberly described as a holocaust,22 and which despite decades of scientific and environmentalist pleas remains a virtual non-topic in society, the mass media, and humanistic and other academic literatures. Several works on climate change (though by no means all) extensively examine the consequences of global warming for biodiversity, 23 but rarely is it mentioned that biodepletion predates dangerous greenhouse-gas buildup by decades, centuries, or longer, and will not be stopped by a technological resolution of global warming. Climate change is poised to exacerbate species and ecosystem losses—indeed, is doing so already. But while technologically preempting the worst of climate change may **temporarily** avert some of those losses, such a resolution of the climate quandary will not put an end to—will **barely address**—the ongoing destruction of life on Earth.

#### Sunstein -- "The general attitude here is "act, then learn" " – allows the state to take disciplinary action in the name of warming, perpetuating hegemonic nuclear discourses and a state of exception

Kaur 11 -- Senior Lecturer in University of Sussex, London, Anthropology, Centre for Migration Research (Dr. Raminder, 6/9/11, "A ‘Nuclear Renaissance’, Climate Change and the State of Exception," http://www.dianuke.org/a-%E2%80%98nuclear-renaissance%E2%80%99-climate-change-and-the-state-of-exception/)

Increasingly, nation-states such as China, France, Russia, Britain and India are promoting the nuclear option: firstly, as the main large-scale solution to developing economies, growing populations, and increasing demands for a consumer-led lifestyle, and secondly, in order to tend to environmental concerns of global warming and climate change.[i] India’s Prime Minister, Manmohan Singh, speaking at a conference of atomic scientists in Delhi, for instance, announced a hundred-fold increase to 470,000 megawatts of energy that could come from Indian nuclear power stations by 2050. He said, ‘This will sharply reduce our dependence on fossil fuels and will be a major contribution to global efforts to combat climate change, adding that Asia was seeing a huge spurt in “nuclear plant building” for these reasons (Ramesh 2009).The Fukushima nuclear reactor disaster of March 2011 has, for the time being at least, dented some nation-state’s nuclear power programmes. In India, however, the government has declared that it has commissioned further safety checks whilst continuing its nuclear development as before. Whilst the ‘carbon lobby’, including the fossil-fuels industries, stand to gain by undermining the validity of global warming, it appears that the ‘nuclear lobby’ benefits enormously from the growing body of evidence for human-based global warming. This situation has led to a significant nuclear renaissance with the promotion of nuclear power as ‘clean and green energy’. John Ritch, Director General of the World Nuclear Association, goes so far as to describe the need to embrace nuclear power as a ‘global and environmental imperative’, for ‘Humankind cannot conceivably achieve a global clean-energy revolution without a huge expansion of nuclear power’ (Ritch nd). To similar ends, India’s Union Minister of State for Environment and Forests, Jairam Ramesh, remarked, ‘It is paradoxical that environmentalists are against nuclear energy’ (Deshpande 2009). With a subtle sleight of hand, nuclear industries are able to promote themselves as environmentally beneficial whilst continuing business-as-usual at an expansive rate. Such global and national views on climate change are threatening to monopolise the entire environmentalist terrain where issues to do with uranium and thorium mining, the ecological costs of nuclear power plant construction, maintenance, operation and decommissioning, the release of water coolant, and the transport and storage of radioactive waste are held as subsidiary considerations to the threat of climate change. Basing much of my evidence in India, I note how the conjunction of nuclear power and climate change has lodged itself in the public imagination and is consequently in a powerful position, creating a ‘truth regime’ favoured both by the nuclear lobby and those defenders of climate change who want more energy without restructuration of market-influenced economies or changes in consumerist lifestyle. The urgency of climate change discourses further empower what I call the ‘nuclear state of exception’ which, in turn, lends credence to the veracity of human-centric global warming. The Nuclear State of Exception Although Giorgio Agamben’s (2005) work on the normalisation of exceptional state practice has been much cited, it would appear that Robert Jungk anticipated some of his main axioms. Jungk outlines how the extraordinary, as it pertains to the state’s possession of nuclear weapons and the development of atomic industries since the mid-1940s, became the ordinary (Jungk 1979: 58). When associated with nuclear weapons, the state operates under the guise of a paradigm of security which promises ‘peace’ in terms of a nuclear deterrence to other countries, and also legitimates the excesses of state conduct whilst abrogating citizens’ rights in the name of ‘national security’. Jungk adds that, in fact, state authoritarianism applied to all nation-states with nuclear industries: ‘Nuclear power was first used to make weapons of total destruction for use against military enemies, but today it even imperils citizens in their own country, because there is no fundamental difference between atoms for peace and atoms for war’ (Jungk 1979: vii). The inevitable spread of technological know-how through a range of international networks and the effects of the US’ ‘atoms for peace’ program in the 1950s led to a greater number of nations constructing institutions for civilian nuclear power, a development that was later realised to enable uranium enrichment for the manufacture of weapons. Due to the indeterminacy between atoms for peace and atoms for war, the nuclear industries began to play a key part in several nations’ security policies, both externally with reference to other states, and also internally with reference to objectors and suspected anti-national contingents. Jungk notes ‘the important social role of nuclear energy in the decline of the constitutional state into the authoritarian nuclear state’ by focusing on a range of indicators, including a report published by the American National Advisory Committee on Criminal Justice in 1977 which suggested that: in view of the ‘high vulnerability of technical civilization’, emergency legislation should be introduced making it possible temporarily to ignore constitutional safeguards without previous congressional debate or consultation with the Supreme Court. (1979: 135) The bio-techno-political mode of governance encapsulates subjects into its folds such that it becomes a ‘technical civilisation’ – a civilisation that, although promising favourable aspects of modernity to the populace and development for the country, is also to be accompanied by several risks to human and environmental safety that propel states including democracies further towards authoritarianism.

‘Big science’ – that is, science that is centralised or at least circumscribed by the state – and the bureaucracies surrounding it play a critical part in the normalisation of the state of exception, and the exercise of even more power over their citizens. Jungk elaborates on the routinisation of nuclear state violence, epistemological, juridical and physical: Such measures will be justified, not as temporary measures made necessary by an exceptional emergency … but by the necessity of providing permanent protection for a perpetually endangered central source of energy that is regarded as indispensable. A nuclear industry means a permanent state of emergency justified by a permanent threat. (1979: 135) This permanent state of emergency with respect to anything nuclear applies to restrictions on citizens’ freedom, the surveillance and criminalisation of critics and campaigners, the justification of the mobilisation of thousands of policemen and sometimes military to deal with peaceful demonstrators against nuclear power, and a hegemony on ‘truth-claims’ where the nuclear industries are held as the solution to growing power needs whilst advancing themselves as climate change environmentalists. In this way, power structures and lifestyles need not be altered where nuclear power becomes, ironically, a powerful mascot of ‘clean and green’ energy. In India, the capitalist modality of the nuclear state was exacerbated by the ratification of the Indo-US civilian nuclear agreement in 2008, a bilateral accord which enables those countries in the Nuclear Suppliers Group to provide material and technology for India’s civilian nuclear operations even though it is not a signatory to the Nuclear non-Proliferation Treaty. This has led to an expansion of the nuclear industries in the country where the limited indigenous resources of uranium could then be siphoned into the nuclear weapons industries. The imposition of the nuclear state hand-in-hand with multinational corporations in regions such as Koodankulam in Tamil Nadu (with the Russian nuclear company, Atomstroyexport), Haripur in West Bengal (with the Russian company, Rosatom) or Jaitapur in Maharashtra (with the French company, Areva), without due consultation with residents around the proposed nuclear power plants, has prompted S. P. Udayakumar (2009) to recall an earlier history of colonisation describing the contemporary scenario as an instance of ‘nucolonization (nuclear + colonization)’. The Indian nuclear state, with its especial mooring in central government, has conducted environmental enquiries primarily for itself – and this so in only a summary fashion. In a context where the Ministry of Environment and Forests can override the need for an Environmental Impact Assessment (EIA) report for the first two nuclear reactors at Koodankulam in 2001, saying that the decision was first made in the 1980s before the EIA Notification Act (1994); or where the Supreme Court of India can dismiss a petition against the construction of these reactors simply by saying: ‘There is no reason as to why this court should sit in appeal over the Governmental decision relating to a policy matter more so, when crores of rupees having [sic] been invested’ (cited in Goyal 2002), then there is a strong basis upon which to consider the Indian state as a whole as a nuclearised state – that is, a state wherein matters relating to nuclear issues are given inordinate leeway across the board. The nuclear enclave consisting of scientists, bureaucrats and politicians, is both the exception to and the rule that underpins the rest of state practice. So even though we may be talking about a domain of distinct governmental practice and political technology as encapsulated by the notion of a nuclear state, it is evident that its influence spreads beyond the nuclear domain in a discourse of nuclearisation through state-related stratagems which have become increasingly authoritarian and defence-orientated since the late 1990s. In a nutshell, discourses about the urgency of climate change, global warming, nuclear power and defence have converged in a draconian and oppressive manner that now parades itself as the necessary norm for the nation. Conclusion Despite their particularities, machinations of the Indian nuclear state are also notable elsewhere. Joseph Masco elaborates on the ‘national-security state’ in the USA (2008: 14). Tony Hall comments upon the ‘defence-dominated, well-cushioned [nuclear] industry’ in the UK (1996: 10). And on the recent issue of the construction of more nuclear power stations in Britain, David Ockwell observes that a public hearing was only undertaken for ‘instrumental reasons (i.e. it was a legal requirement), as demonstrated by a public statement by then prime minister Tony Blair that the consultation “won’t affect the policy at all”’ (2008: 264). These narratives are familiar across the board where a nuclear renaissance is apparent. But critics continue to dispute the hijacking of environmentalism by the state, and argue that if climate change is the problem, then nuclear power is by no means a solution. Moreover, the half-life of radioactive waste cannot be brushed away in a misplaced vindication of the saying, ‘out of sight, out of mind’.

#### Eco-apocalypse –

#### Burke is riddled with apocalyptic rhetoric -- human extinction could come from temperature shifts, wildfires, water scarcity, rainfall, tropical storms

#### We control uniqueness – this warming rhetoric is disabling effective approaches to warming now

Barrett & Gilles 12 -- \*nonprofit director and consultant for over a decade, her writing has appeared in newspapers, magazines, and blogs nationwide AND \*\*consulted for numerous political campaigns, advocacy organizations, and global NGOs, and has been profiled in the Washington Post, the Wall Street Journal, the Boston Globe, and Fast Company (Mel and Metthew Barrett, 4/23/12, "How Apocalyptic Thinking Prevents Us from Taking Political Action," http://www.theatlantic.com/politics/archive/2012/04/how-apocalyptic-thinking-prevents-us-from-taking-political-action/255758/)

To understand why fewer people believe in climate change even as evidence mounts, we must look beyond the industry-funded movement to deny the reality and effects of climate change. Perhaps equally important -- if not quite equally culpable -- has been the extent to which both the proponents and opponents of human-made climate change have led us down a cul-de-sac of conversation by exploiting the apocalyptic metaphor to make their case. Whether by design or by accident, the initial warnings of environmentalists -- of oceans rising to engulf our most beloved metropolises, of amber waves of grain scorched into a desert landscape -- activated the apocalyptic impulse. The focus on disastrous repercussions for our behavior at some point in the future echoed the warnings of the Israelite priests to wayward Jews in Babylon or, later, to those who submitted too willingly to Alexander's process of Hellenization. It was a familiar story: change, and change radically, or face hell on earth. Perhaps there was no other way to sound the alarm about the devastating threat presented by global climate change, but that echo of apocalyptic warning was quickly seized upon by the naysayers to dismiss the evidence out of hand. We've heard this story before, the deniers insisted, and throughout history those who have declared the end of the world was near have always been proven wrong. As early as 1989, the industry front man Patrick Michaels, a climatologist and global warming skeptic, was warning in the op-ed pages of the Washington Post of this new brand of "apocalyptic environmentalism," which represented "the most popular new religion to come along since Marxism." That the solutions to global warming (a less carbon-intensive economy, a more localized trade system, a greater respect for nature's power) parallel so perfectly the dream of environmentalists, and that the causes of global warming (an unrestrained industrial capitalism reliant on the continued and accelerating consumption of fossil fuels) parallel the economic dream of conservatives, has simply exacerbated the fact that global warming has now become just another front in the culture wars. By seizing upon and mocking the apocalyptic imagery and rhetoric of those sounding the alarm, the industry front groups succeeded in framing the debate about global warming into a question about what one believes. Thus, entangled with the myth of apocalypse -- and its attendant hold on our own sense of belief and self-identity -- the debate about anthropogenic climate change has reached an impasse. You believe in the Rapture; I believe in global warming -- and so the conversation stops. But global climate change is not an apocalyptic event that will take place in the future; it is a human-caused trend that is occurring now. And as we expend more time either fearfully imagining or vehemently denying whether that trend will bring about a future apocalypse, scientists tell us that the trend is accelerating. Talking about climate change or peak oil through the rhetoric of apocalypse may make for good television and attention-grabbing editorials, but such apocalyptic framing hasn't mobilized the world into action. Most of us are familiar with the platitude "When the only tool you have is a hammer, everything looks like a nail." In a similar way, our over-reliance on the apocalyptic storyline stands between us and our ability to properly assess the problems before us. Some see the looming crises of global warming and resource and energy depletion and conclude that inaction will bring about the end of civilization: only through a radical shift toward clean energy and conservation, those on the Left argue, can we continue the way of life that we have known. Those on the Right dismiss the apocalyptic threats altogether, because the proposed solutions to peak oil, global warming, and overpopulation conflict with core conservative beliefs about deregulation and the free-market economy, or with a religious worldview that believes humanity is not powerful enough to alter something as large as our climate. Still others dismiss the catalog of doom and gloom as mere apocalypticism itself. Surely, we convince ourselves, all the dire warnings about the effects of global warming aren't that different from the world-ending expectations of the Rapturists? The result is that the energy we could expend addressing the problems before us is instead consumed by our efforts to either dismiss the threat of apocalypse or to prove it real. Ultimately, the question becomes not what to do about the threats before us but whether you believe in the threats before us. By allowing the challenges of the 21st century to be hijacked by the apocalyptic storyline, we find ourselves awaiting a moment of clarity when the problems we must confront will become apparent to all -- or when those challenges will magically disappear, like other failed prophecies about the end of the world. Yet the real challenges we must face are not future events that we imagine or dismiss through apocalyptic scenarios of collapse -- they are existing trends. The evidence suggests that much of what we fear in the future -- the collapse of the economy, the arrival of peak oil and global warming and resource wars -- has already begun. We can wait forever, while the world unravels before our very eyes, for an apocalypse that won't come. The apocalyptic storyline becomes a form of daydreaming escape: the threat of global warming becomes a fantasy to one day live off the grid, or buy a farm, or grow our own food; economic collapse becomes like a prison break from the drudgery of meaningless and increasingly underpaid work in a soul-crushing cubicle; peak oil promises the chance to finally form a community with the neighbors to whom you've never spoken. Yet despite the fantasia peddled by Hollywood and numerous writers, a world battered by natural disasters and global warming, facing declining natural resources and civic unrest, without adequate water or energy or food, with gross inequalities between the rich and the poor, is not a setting for a picaresque adventure, nor is it the ideal place to start living in accord with your dreams. The deeper we entangle the challenges of the 21st century with apocalyptic fantasy, the more likely we are to paralyze ourselves with inaction -- or with the wrong course of action. We react to the idea of the apocalypse -- rather than to the underlying issues activating the apocalyptic storyline to begin with -- by either denying its reality ("global warming isn't real") or by despairing at its inevitability ("why bother recycling when the whole world is burning up?"). We react to apocalyptic threats by either partying (assuaging our apocalyptic anxiety through increased consumerism, reasoning that if it all may be gone tomorrow, we might as well enjoy it today), praying (in hopes that divine intervention or mere time will allow us to avoid confronting the challenges before us), or preparing (packing "bugout" packs for a quick escape or stocking up on gold, guns, and canned food, as though the transformative moment we anticipate will be but a brief interlude, a bad winter storm that might trap us indoors for a few days or weeks but that will eventually melt away). None of these responses avert, nor even mitigate, the very threats that have elicited our apocalyptic anxiety in the first place. Buying an electric car doesn't solve the problem of a culture dependent on endless growth in a finite world; building a bunker to defend against the zombie hordes doesn't solve the growing inequities between the rich and poor; praying for deliverance from the trials of history doesn't change that we must live in the times in which we were born. Indeed, neither partying, nor preparing, nor praying achieves what should be the natural goal when we perceive a threat on the horizon: we should not seek to ignore it, or simply brace for it, but to avert it.

#### Also references resource conflicts – these are hype and your discourse causes them and environmental degradation

Kumari 12 -- International Relations Masters graduate @ University of Nottingham (Parmila, 1/29/12, "Securitising The Environment: A Barrier To Combating Environment Degradation Or A Solution In Itself?" <http://www.e-ir.info/2012/01/29/securitising-the-environment-a-barrier-to-combating-environment-degradation-or-a-solution-in-itself/>)

Secondly, the assertion that environmental degradation is a primary reason of conflict is purely speculative (Barnett 2003:10). Barnett suggests that the ‘evidence’ provided in support is a collection of historical events chosen to support the conflict-scarcity storyline and reify the realist assumption that eventually humans will resort to violence (Barnett 2001:66). This is as opposed to acknowledging that humans are equally capable of adapting. Thirdly, research shows that it is abundance of resources which drives competition, not scarcity (Barnet 2003:11). This makes sense because any territorial conquest to obtain resources will be expensive. A poor country suffering from resource scarcity would not be able to afford an offensive war(Deudney 1990: 309-11). The second and third points mean that environmental-conflict literature counteracts any attempts at solving the problem of environmental degradation. The discourse attributes high intentionality to people-because of scarcity they decide to become violent. This ignores the fact that human actions are not intended to harm the environment. The high intentionality given to people prevents them from being seen as victims who need help. Instead they are pictured as threats to state security. This view can exacerbate ethnic tensions as the state uses minority groups as scapegoats for environmental degradation. It also means that only those involved in conflict are relevant to environmental security, not those who are vulnerable (Detraz and Betsill 2009:307-15). In this way the South is scripted as “primeval Other” (Barnett 2001:65), where order can only be maintained by the intervention of the North, rather than by the provision of aid. The North’s agency in creating the environmental problems is completely erased. Instead environmental degradation is seen from the perspective of the individual state, questioning how it could affect the state, i.e. increased migration (Allenby 2000:18) and this leads to the adoption of narrow policies. Saad has said that securitising the environment in this way allows the North to justify intervening and forcing developing nations to follow policies which encapsulate the North’s norms (Saad 1991:325-7). In this way the powerful become stronger, and the weak weaker. This view may affect the South’s relations with the North. For example, Detraz and Betsill have commented on tensions between the North and South in the 2007 United Nations Security Council debate on climate change. Only 29% of the Southern states compared to 70% of Northern speakers supported the idea of the Security Council being a place to develop a global response to climate change. The reasons for this difference was that shifting decision-making to the Security Council would make Southern states unable to promote efficiently their interests in obtaining resources for climate adaptation and mitigation plans. Furthermore, Egypt and India argued that in suggesting this Northern countries were avoiding their responsibilities for controlling greenhouse gases, by trying to “shift attention to the need to address potential climate-related conflict in the South” (Detraz and Betsill 2009:312). In this way environmental security becomes a barrier because the traditional (realist) concept of security is used to immobilise any action towards dealing with the root causes of environmental degradation.

#### Need to Calculate –

#### Bostrum -- "one hundred trillion potential human beings is lost for every second"

#### Evaluate probability first – “any risk” logic makes decisionmaking impossible

Meskill 9 (David, professor at Colorado School of Mines and PhD from Harvard, “The "One Percent Doctrine" and Environmental Faith,” Dec 9, http://davidmeskill.blogspot.com/2009/12/one-percent-doctrine-and-environmental.html)

Tom Friedman's piece today in the Times on the environment (http://www.nytimes.com/2009/12/09/opinion/09friedman.html?\_r=1) is one of the flimsiest pieces by a major columnist that I can remember ever reading. He applies Cheney's "one percent doctrine" (which is similar to the environmentalists' "precautionary principle") to the risk of environmental armageddon. But this doctrine is both intellectually incoherent and practically irrelevant. It is intellectually incoherent because it cannot be applied consistently in a world with many potential disaster scenarios. In addition to the global-warming risk, there's also the asteroid-hitting-the-earth risk, the terrorists-with-nuclear-weapons risk (Cheney's original scenario), the super-duper-pandemic risk, etc. Since each of these risks, on the "one percent doctrine," would deserve all of our attention, we cannot address all of them simultaneously. That is, even within the one-percent mentality, we'd have to begin prioritizing, making choices and trade-offs. But why then should we only make these trade-offs between responses to disaster scenarios? Why not also choose between them and other, much more cotidien, things we value? Why treat the unlikely but cataclysmic event as somehow fundamentally different, something that cannot be integrated into all the other calculations we make? And in fact, this is how we behave all the time. We get into our cars in order to buy a cup of coffee, even though there's some chance we will be killed on the way to the coffee shop. We are constantly risking death, if slightly, in order to pursue the things we value. Any creature that adopted the "precautionary principle" would sit at home - no, not even there, since there is some chance the building might collapse. That creature would neither be able to act, nor not act, since it would nowhere discover perfect safety. Friedman's approach reminds me somehow of Pascal's wager - quasi-religious faith masquerading as rational deliberation (as Hans Albert has pointed out, Pascal's wager itself doesn't add up: there may be a God, in fact, but it may turn out that He dislikes, and even damns, people who believe in him because they've calculated it's in their best interest to do so). As my friend James points out, it's striking how descriptions of the environmental risk always describe the situation as if it were five to midnight. It must be near midnight, since otherwise there would be no need to act. But it can never be five \*past\* midnight, since then acting would be pointless and we might as well party like it was 2099. Many religious movements - for example the early Jesus movement - have exhibited precisely this combination of traits: the looming apocalypse, with the time (just barely) to take action.

#### Extinction won’t happen – false narratives of staving off apocalypse have continuously resulted in genocide and oppression.

Quinby 99 (Lee, Distinguished Lecturer at the Macaulay Honors College of the City University of New York City, Millennial Seduction, p. 2-5)

Promoting ways of thinking and living unhampered by fear of earth-shattering catastrophe and extricated from the kindred conviction that a perfect world is on the horizon is admittedly an uphill task. Endism has long run deep in the United States, ranging from a literal acceptance of the divine apocalypse predicted in the Book of Revelation to a more nebulous sense of impending doom, whether from asteroids, viruses, or technology.3 Believing that the end of the world looms means living in the shadow of fear. Some believers report suffering intensely whereas others disclose a more general anxiety or routine agitation. What makes living with apocalyptic belief tolerable for so many is its accompanying millennial dream, the current of hope that promises the fullness of Truth unveiled and visions of perfection for the elect. The elect are the chosen ones, whether they be divinely ordained, technologically proficient, or just plain lucky, the ones tapped to survive destruction and reign supreme in the millennium. Not that such hope is the antidote to fear—at least not the kind that is framed in apocalyptic zeal. Apocalyptic fear and millennialist hope fit hand in glove, with the glove of augmented desire needing the hand of inordinate fear to fill out its shape. I call this sense of millennial hope electism, not only to highlight its relation to endism, but also to make clear the inherent divisiveness of apocalypse. Even when electism takes a benign, generous and nebulous form, division and hierarchy prevail. For example, although the spiritual progress of New Age belief is supposed to envelop the whole world and for some the universe, the concept of the elect remains. It is simply extended to all in a promised transformation toward higher consciousness; the partition between the chosen and the doomed becomes temporal, dividing between the former and new ages.4 More often, however, electism is cast overtly in oppositional terms in keeping with the fierce battle between the forces of good and evil envisioned in Revelation. The rub, of course, is that it is impossible to disprove apocalyptic prophecy once and for all. But it can't be proven either; even the most ardent believers concede that faith is necessary. In the meantime, it should be possible to shift focus to the historical record of apocalyptic and millennialist belief. First, the end of the world has not arrived as predicted. This seems obvious, but given the recurrent insistence that the end is near, it needs to be stated bluntly. The failure rate of this prediction over the course of 2000 years is pretty astounding. If more than two millennia have passed since apocalyptic writings emerged in Jewish and then Christian society, there is no good evidence to accept them as applicable to the present. Even though natural calamities and technological disasters do happen, there is no historical or scientific evidence to link such occurrences to supernatural agency. And although there are well-known stories that tell of world-ending calamities—the biblical flood, for example—such disasters are more likely to be exaggerations of earthquakes, volcanoes, and mudslides that may have destroyed whole societies, but not the earth. Whatever the cause of the flood that Noah survived, it is obviously clear that—despite numerous predictionsworld-destructive disasters, such as earthquakes, floods, asteroids, and so on, have not happened. So my first point is what hasn't happened. My second point is what has happened as a result of the rise and spread of apocalypticism and millennialism as systems of belief. Apocalypticism claims that a supernatural or exceedingly powerful force, like nuclear disaster, for example, will bring world destruction, but that an elect number will be granted a new, transformed earth. This powerful conviction that time and the world as we know it are ending has brought both terror and fervor to multitudes over the centuries. As many scholars have pointed out, such a belief is far more likely to accompany poverty and persecution than privilege. Heartfelt expression for suffering to come to an end has a history of spurring struggle. This struggle includes holy wars against earthly forces believed to be under the sway of Satan as well as personal vendettas against forces of technology, by the unabomber, for example. Like apocalyptic endism, millennialist electism also stems most notably from the Book of Revelation, specifically Chapter 20, Verse 4,\* which proclaims that the martyred faithful will be returned to enjoy a thousand-year reign with the son of God while Satan is bound away in a lake of fire. From the Crusades to the colonization of the Americas to the Cold War, millennialism has spurred desire to be one of the elect, desire bolstered by apocalyptic demands to fight against forces of evil. The sense of being chosen to survive the days of doom easily conflates with believing one has been called to enact them, thereby bringing about the New Era. The twentieth century alone provides ample evidence of this, including one of its most atrocious brands of apocalyptic millennialism, the Third Reich, as well as its current white-supremacist and militia offshoots. Evoking Nazism is not meant to be alarmist. While I do want to insist that millennialist belief has been a powerful moving force for social domination, I also want to acknowledge, as Stephen Jay Gould has put it, that there probably will be more party than terror this time around.5 Nevertheless, it is important not to dismiss the detrimental effects of apocalypticism and millennialism, not only in U.S. culture, which is the focus of this book, but also around the world.° What this book stresses is that apocalyptic and millennialist principles and practices interfere with the goals of democratic societies. My view runs contrary to scholars who regard apocalyptic zeal as necessary to democratic social transformation, as indeed essential to the establishment of the United States as a democracy and to the achievements of the civil rights movement in the sixties and of second-wave feminism.7 This stance emerged out of Norman Cohn's highly influential work The Pursuit of the Millennium, which details a number of links between apocalyptic belief and egalitarian movements.8 But it is a reductive reading of Cohn's complex account, which situates what he calls "revolutionary millenarianism" in relation to other social movements in Europe between the eleventh and seventeenth centuries. He points out that both peasant revolts and urban insurrections were "very common and moreover often successful," contrasting them to apocalyptic groups which came together from an "unorganized, atomized population, rural or urban or both." Banding together around a charismatic prophet, often an intellectual, including former priests, rather than one of the poor, the millenarian groups typically had leaders who were obsessed with the end-time. Unlike the populist social movements, these fringe groups embodied a kind of radical desperation. Stances linking apocalypse to democracy tend to overlook the ways in which strident apocalyptic conviction propels such marginalized groups toward martyrdom or genocidal massacre because of their willingness to defy their enemies.9 When these designated enemies are as powerful as the U.S. government, incidents like Waco can occur. Similarly, many other groups run the danger of confusing unconditional defiance with radical social change in the name of democratic practice.

#### Structural violence outweighs – kills more people

Gilligan 96 (James, Faculty – Department of Psychiatry, Harvard Medical School, Violence: Our Deadly Epidemic and its Causes, p. 191-196)

You cannot work for one day with the violent people who fill our prisons and mental hospitals for the criminally insane without being forcibly and constantly reminded of the extreme poverty and discrimination that characterize their lives. Hearing about their lives, and about their families and friends, you are forced to recognize the truth in Gandhi’s observation that the deadliest form of violence is poverty. Not a day goes by without realizing that trying to understand them and their virulent behavior in purely individual terms is impossible and wrong-headed. Any theory of violence, especially a psychological theory, that evolves from the experience of men in maximum security prisons and hospitals for the criminally insane must begin with the recognition that these institutions are only microcosms. They are not where the major violence of our society takes place, and the perpetrators who fill them are far from being the main causes of most violent deaths. Any approach to a theory of violence needs to begin with a look at the structural violence of this country. Focusing merely on those relatively few men who commit what we define as murder could distract us from examining and learning from those structural causes of violent death that are far more significant from a numerical or public health, or human, standpoint By “structural violence” I mean the increased rates of death and disability suffered by those who occupy the bottom rungs of society, as contrasted with the relatively lower death rates experienced by those who are above them. Those excess deaths (or at least a demonstratably large portion of them) are a function of class structure; and that structure is itself a product of society’s collective human choices, concerning how to distribute the collective wealth of the society. These are not acts of God. I am contrasting “structural” with “behavioral violence,” by which I mean the non-natural deaths and injuries that are caused by specific behavioral actions of individuals against individuals, such as the deaths we attribute to homicide, suicide, soldiers in warfare, capital punishment, and so on. Structural violence differs from behavioral violence in at least three major respects The lethal effects of structural violence operate continuously rather than sporadically, whereas murders, suicides, executions, wars, and other forms of behavioral violence occur one at a time. Structural violence operates more or less independently of individual acs; independent of individuals and groups (politicians, political parties, voters) whose decisions may nevertheless have lethal consequences for others. Structural violence is normally invisible, because it may appear to have had other (natural or violent) causes. Neither the existence, the scope and extent, nor the lethal power of structural violence can be discerned until we shift our focus from a clinical or psychological perspective, which looks at one individual at a time, to the epidemiological perspective of public health and preventative medicine. Examples are all around us. [Continues – Page 195] The 14 to 18 million deaths a year caused by structural violence compare with about 100,000 deaths per year from armed conflict. Comparing this frequency of deaths from structural violence to the frequency of those caused by major military and political violence, such as World War II (an estimated 49 million military and civilian deaths, including those caused by genocide---or about eight million per year, 1939-1945), the Indonesian massacre of 1965-66 (perhaps 575,000 deaths), the Vietnam war (possibly two million, 1954-1973), and even a hypothetical nuclear exchange between the U.S. and the U.S.S.R. (232 million), it was clear that even war cannot begin to compare with structural violence, which continues year after year. In other words, every fifteen years, on the average, as many people die because of relative poverty as would be killed in a nuclear war that caused 232 deaths, and every single year, two to three times as many people die from poverty throughout the world as were killed by the Nazi genocide of the Jews over a six-year period. This is, in effect, the equivalent of an ongoing, unending, in fact accelerating, thermonuclear war, or genocide, perpetuated on the week and poor every year of every decade, throughout the world. Structural violence is also the main cause of behavioral violence on a socially and epidemiologically significant scale (from homicide and suicide to war and genocide). The question as to which of the two forms of violence—structural or behavioral—is more important, dangerous, or lethal is moot, for they are inextricably related to each other, as cause to effect.

### Tricks

#### Prefer our disjunctive scenarios to their short-term conjunctive scenarios.

Eliezer **Yudkowsky**, 8/31/**2006**. Singularity Institute for Artificial Intelligence Palo Alto, CA. “Cognitive biases potentially affecting judgment of global risks,” Forthcoming in Global Catastrophic Risks, eds. Nick Bostrom and Milan Cirkovic, singinst.org/upload/cognitive-biases.pdf.

The conjunction fallacy similarly applies to futurological forecasts. Two independent sets of professional analysts at the Second International Congress on Forecasting were asked to rate, respectively, the probability of "A complete suspension of diplomatic relations between the USA and the Soviet Union, sometime in 1983" or "A Russian invasion of Poland, and a complete suspension of diplomatic relations between the USA and the Soviet Union, sometime in 1983". The second set of analysts responded with significantly higher probabilities. (Tversky and Kahneman 1983.) In Johnson et. al. (1993), MBA students at Wharton were scheduled to travel to Bangkok as part of their degree program. Several groups of students were asked how much they - 6 - were willing to pay for terrorism insurance. One group of subjects was asked how much they were willing to pay for terrorism insurance covering the flight from Thailand to the US. A second group of subjects was asked how much they were willing to pay for terrorism insurance covering the round-trip flight. A third group was asked how much they were willing to pay for terrorism insurance that covered the complete trip to Thailand. These three groups responded with average willingness to pay of $17.19, $13.90, and $7.44 respectively. According to probability theory, **adding additional detail onto a story must render the story less probable**. It is less probable that Linda is a feminist bank teller than that she is a bank teller, since all feminist bank tellers are necessarily bank tellers. Yet human psychology seems to follow the rule that adding an additional detail can make the story more plausible. People might pay more for international diplomacy intended to prevent nanotechnological warfare by China, than for an engineering project to defend against nanotechnological attack from any source. The second threat scenario is less vivid and alarming, but the defense is more useful because it is more vague. More valuable still would be strategies which make humanity harder to extinguish without being specific to nanotechnologic threats - such as colonizing space, or see Yudkowsky (this volume) on AI. Security expert Bruce Schneier observed (both before and after the 2005 hurricane in New Orleans) that the U.S. government was guarding specific domestic targets against "movie-plot scenarios" of terrorism, at the cost of taking away resources from emergency-response capabilities that could respond to any disaster. (Schneier 2005.) Overly detailed reassurances can also create false perceptions of safety: "X is not an existential risk and you don't need to worry about it, because A, B, C, D, and E"; where the failure of any one of propositions A, B, C, D, or E potentially extinguishes the human species. "We don't need to worry about nanotechnologic war, because a UN commission will initially develop the technology and prevent its proliferation until such time as an active shield is developed, capable of defending against all accidental and malicious outbreaks that contemporary nanotechnology is capable of producing, and this condition will persist indefinitely." **Vivid, specific scenarios can inflate our probability estimates of security**, as well as misdirecting defensive investments into needlessly narrow or implausibly detailed risk scenarios. More generally, people tend to overestimate conjunctive probabilities and underestimate disjunctive probabilities. (Tversky and Kahneman 1974.) That is, **people tend to overestimate the probability that**, e.g., **seven events of 90% probability will all occur**. Conversely, **people tend to underestimate the probability that at least one of seven events of 10% probability will occur**. Someone judging whether to, e.g., incorporate a new startup, must evaluate the probability that many individual events will all go right (there will be sufficient funding, competent employees, customers will want the product) while also considering the likelihood that at least one critical failure will occur (the bank refuses - 7 - a loan, the biggest project fails, the lead scientist dies). This may help explain why only 44% of entrepreneurial ventures3 survive after 4 years. (Knaup 2005.) Dawes (1988) observes: 'In their summations lawyers avoid arguing from disjunctions ("either this or that or the other could have occurred, all of which would lead to the same conclusion") in favor of conjunctions. Rationally, of course, disjunctions are much more probable than are conjunctions.' The scenario of humanity going extinct in the next century is a disjunctive event. It could happen as a result of any of the existential risks discussed in this book - or some other cause which none of us foresaw. Yet for a futurist, disjunctions make for an awkward and unpoetic-sounding prophecy.

#### Worst-case scenario planning causes serial policy failure and disables solvency

**Schneier** 20**10** [Bruce, internationally renowned security technologist and author, MA CS American Univ. 3-13 http://www.schneier.com/blog/archives/2010/05/worst-case\_thin.html

At a security conference recently, the moderator asked the panel of distinguished cybersecurity leaders what their nightmare scenario was. The answers were the predictable array of large-scale attacks: against our communications infrastructure, against the power grid, against the financial system, in combination with a physical attack. I didn't get to give my answer until the afternoon, which was: "My nightmare scenario is that people keep talking about their nightmare scenarios." There's a certain blindness that comes from worst-case thinking. An extension of the precautionary principle, it involves imagining the worst possible outcome and then acting as **if it were a certainty**. **It substitutes imagination for thinking, speculation for risk analysis, and fear for reason**. It fosters powerlessness and vulnerability and magnifies social paralysis. And it makes us more vulnerable to the effects of terrorism. Worst-case thinking means generally bad decision making for several reasons. First, it's only half of the cost-benefit equation. Every decision has costs and benefits, risks and rewards. By speculating about what can possibly go wrong, and then acting as if that is likely to happen, worst-case thinking focuses only on **the extreme but improbable risks and does a poor job at assessing outcomes.** Second, it's based on flawed logic. It begs the question by assuming that a proponent of an action must prove that the nightmare scenario is impossible. Third, it can be used to support any position or its opposite. If we build a nuclear power plant, it could melt down. If we don't build it, we will run short of power and society will collapse into anarchy. If we allow flights near Iceland's volcanic ash, planes will crash and people will die. If we don't, organs won’t arrive in time for transplant operations and people will die. If we don't invade Iraq, Saddam Hussein might use the nuclear weapons he might have. If we do, we might destabilize the Middle East, leading to widespread violence and death. Of course, not all fears are equal. **Those that we tend to exaggerate are more easily justified by worst-case thinking**. So terrorism fears trump privacy fears, and almost everything else; technology is hard to understand and therefore scary; nuclear weapons are worse than conventional weapons; our children need to be protected at all costs; and annihilating the planet is bad. Basically, any fear that would make a good movie plot is amenable to worst-case thinking. Fourth and finally, worst-case thinking validates ignorance. Instead of focusing on what we know, it focuses on what we don't know -- and what we can imagine. Remember Defense Secretary Rumsfeld's quote? "Reports that say that something hasn't happened are always interesting to me, because as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns -- the ones we don't know we don't know." And this: "the absence of evidence is not evidence of absence." **Ignorance isn't a cause for doubt; when you can fill that ignorance with imagination, it can be a call to action**. Even worse, it can lead to hasty and dangerous acts. You can't wait for a smoking gun, so you act as if the gun is about to go off. Rather than making us safer, worst-case thinking has the potential **to cause dangerous escalation**. The new undercurrent in this is that our society no longer has the ability to calculate **probabilities. Risk assessment is devalued**. Probabilistic thinking is repudiated in favor of "possibilistic thinking": Since we can't know what's likely to go wrong, let's speculate about what can possibly go wrong. Worst-case thinking leads to bad decisions, bad systems design, and bad security. And we all have direct experience with its effects: airline security and the TSA, which we make fun of when we're not appalled that they're harassing 93-year-old women or keeping first graders off airplanes. You can't be too careful! Actually, you can. You can refuse to fly because of the possibility of plane crashes. You can lock your children in the house because of the possibility of child predators. You can eschew all contact with people because of the possibility of hurt. Steven Hawking wants to avoid trying to communicate with aliens because they might be hostile; does he want to turn off all the planet's television broadcasts because they're radiating into space? It isn't hard to parody worst-case thinking, and at its extreme it's a psychological condition. Frank Furedi, a sociology professor at the University of Kent, writes: "Worst-case thinking encourages society to adopt fear as one of the dominant principles around which the public, the government and institutions should organize their life. **It institutionalizes insecurity and fosters a mood of confusion and powerlessness.** Through popularizing the belief that worst cases are normal, it incites people to feel defenseless and vulnerable to a wide range of future threats." Even worse, it plays directly into the hands of terrorists, creating a population that is easily terrorized -- even by failed terrorist attacks like the Christmas Day underwear bomber and the Times Square SUV bomber. When someone is proposing a change, the onus should be on them to justify it over the status quo. But worst-case thinking is a way of looking at the world that exaggerates the rare and unusual and gives the rare much more credence than it deserves. It isn't really a principle; it's a cheap trick to justify what you already believe. It lets lazy or biased people make what seem to be cogent arguments without understanding the whole issue. And when people don't need to refute counterarguments, there's no point in listening to them.

### 2NC Alt Solvency

#### The alternative reject's the affirmative's security discourse – think of the alternative as a broader process rather thean a finished product – only way to eschew security logic is to stop the reiteration of threats that marginalize political decision-making – fighting for an alternative political language requires tolerating uncertainty -- tha's Neoclous

#### Even if there are obstacles to the alt’, our thought excercise is more productive than their stable production of the present – the alternative enables a different conception of security that can overcome inevitable conflict Burke 7 (Anthony, Senior Lecturer – School of Politics and Professor of International Relations – University of New South Wales, Beyond Security, Ethics and Violence, p. 68-69)

This chapter is thus an exercise in thinking, which challenges the continuing power of political ontologies (forms of truth and being) that connect security, sovereignty, belonging, otherness and violence in ways that for many **appear like enduring political facts**, inevitable and irrefutable. Conflict, violence and alienation then arise not merely from individual or collective acts whose conditions might be understood and policed; they **condition politics** as such, forming a permanent ground, a dark substrata underpinning the very **possibility of the present**. Conflict and alienation seem inevitable because of the way in which the modem political imagination **has conceived and thought security**, sovereignty and ethics. Israel/ Palestine is chosen here as a particularly urgent and complex example of this problem, but it is a problem with much wider significance. While I hold out the hope that security can be re-visioned away from a permanent dependence on insecurity, exclusion and violence, and I believe it retains normative promise, this analysis takes a deliberate step backward to examine the very real barriers faced by such a project. Security cannot properly be rethought without a deeper understanding of, and challenge to, the political forms and structures it claims to enable and protect. If Ken Booth argues that the state should be a means rather than an end of security, my objective here is to place the continuing power and depth of its status as an end of security, and a fundamental source for political identity, under critical interrogation.' If the state is to become a means of security (one among many) it will have to be fundamentally transformed. The chapter pursues this inquiry in two stages. The first outlines the historic strength and effective redundancy of such an exciusivist vision of security in Israel, wherein Israel not only confronts military and political antagonists with an 'iron wall' of armed force but maps this onto a profound clash of existential narratives, a problem with resonances in the West's confrontation with radical Islamism in the wa**r** on terror. The second, taking up the remainder of the chapter, then explores a series of potential resources in continental philosophy and political theory that might help us to think our way out of a security grounded in violence and alienation. Through a critical engagement with this thought, I aim to construct a political ethics based not in relations between insecure and separated identities mapped solely onto nation-states, but in relations of responsibility and interconnection that can negotiate and recognise both distinct and intertwined histories, identities and needs; an ethics that might underpin a vision of interdependent (national and non-national) existence proper to an integrated world traversed by endless flows of people, commerce, ideas, violence and future potential.

#### Critical intellectualism creates change – answers all of their “alt fails” args

**Jones 99** (Richard Wyn, Professor of International Relations – Aberystwyth University, Security, Strategy, and Critical Theory, p. 155-163)

The central political task of the intellectuals is to aid in the construction of a counterhegemony and thus undermine the prevailing patterns of discourse and interaction that make up the currently dominant hegemony. This task is accomplished through educational activity, because, as Gramsci argues, “every relationship of ‘hegemony’ is necessarily a pedagogic relationship” (Gramsci 1971: 350). Discussing the relationship of the “philosophy of praxis” to political practice, Gramsci claims: It [the theory] does not tend to leave the “simple” in their primitive philosophy of common sense, but rather to lead them to a higher conception of life. If it affirms the need for contact between intellectuals and “simple” it is not in order to restrict scientific activity and preserve unity at the low level of the masses, but precisely in order to construct an intellectual-moral bloc which can make politically possible the intellectual progress of the mass and not only of small intellectual groups. (Gramsci 1971: 332-333). According to Gramsci, this attempt to construct an alternative “intellectual-moral bloc” should take place under the auspices of the Communist Party – a body he described as the “modern prince.” Just as Niccolo Machiavelli hoped to see a prince unite Italy, rid the country of foreign barbarians, and create a virtu-ous state, Gramsci believed that the modern price could lead the working class on its journey toward its revolutionary destiny of an emancipated society (Gramsci 1971: 125-205). Gramsci’s relative optimism about the possibility of progressive theorists playing a constructive role in emancipatory political practice was predicated on his belief in the existence of a universal class (a class whose emancipation would inevitably presage the emancipation of humanity itself) with revolutionary potential. It was a gradual loss of faith in this axiom that led Horkheimer and Adorno to their extremely pessimistic prognosis about the possibilities of progressive social change. But does a loss of faith in the revolutionary vocation of the proletariat necessarily lead to the kind of quietism ultimately embraced by the first generation of the Frankfurt School? The conflict that erupted in the 1960s between them and their more radical students suggests not. Indeed, contemporary critical theorists claim that the deprivileging of the role of the proletariat in the struggle for emancipation is actually a positive move. Class remains a very important axis of domination in society, but it is not the only such axis (Fraser 1995). Nor is it valid to reduce all other forms of domination – for example, in the case of gender – to class relations, as orthodox Marxists tend to do. To recognize these points is not only a first step toward the development of an analysis of forms of exploitation and exclusion within society that is more attuned to social reality; it is also a realization that there are other forms of emancipatory politics than those associated with class conflict.1 This in turn suggests new possibilities and problems for emancipatory theory. Furthermore, the abandonment of faith in revolutionary parties is also a positive development. The history of the European left during the twentieth century provides myriad examples of the ways in which the fetishization of party organizations has led to bureaucratic immobility and the confusion of means with ends (see, for example, Salvadori 1990). The failure of the Bolshevik experiment illustrates how disciplined, vanguard parties are an ideal vehicle for totalitarian domination (Serge 1984). Faith in the “infallible party” has obviously been the source of strength and comfort to many in this period and, as the experience of the southern Wales coalfield demonstrates, has inspired brave and progressive behavior (see, for example, the account of support for the Spanish Republic in Francis 1984). But such parties have so often been the enemies of emancipation that they should be treated with the utmost caution. Parties are necessary, but their fetishization is potentially disastrous. History furnishes examples of progressive developments that have been positively influenced by organic intellectuals operating outside the bounds of a particular party structure (G. Williams 1984). Some of these developments have occurred in the particularly intractable realm of security. These examples may be considered as “resources of hope” for critical security studies (R. Williams 1989). They illustrate that ideas are important or, more correctly, that change is the product of the dialectical interaction of ideas and material reality. One clear security-related example of the role of critical thinking and critical thinkers in aiding and abetting progressive social change is the experience of the peace movement of the 1980s. At that time the ideas of dissident defense intellectuals (the “alternative defense” school) encouraged and drew strength from peace activism. Together they had an effect not only on short-term policy but on the dominant discourses of strategy and security, a far more important result in the long run. The synergy between critical security intellectuals and critical social movements and the potential influence of both working in tandem can be witnessed particularly clearly in the fate of common security. As Thomas Risse-Kappen points out, the term “common security” originated in the contribution of peace researchers to the German security debate of the 1970s (Risse-Kappen 1994: 186ff.); it was subsequently popularized by the Palme Commission report (Independent Commission on Disarmament and Security Issues 1982). Initially, mainstream defense intellectuals dismissed the concept as hopelessly idealistic; it certainly had no place in their allegedly hardheaded and realist view of the world. However, notions of common security were taken up by a number of different intellectuals communities, including the liberal arms control community in the United States, Western European peace researchers, security specialists in the center-left political parties of Western Europe, and Soviet “institutchiks” – members of the influential policy institutes in the Soviet Union such as the United States of America and Canada Institute (Landau 1996: 52-54; Risse-Kappen 1994: 196-200; Kaldor 1995; Spencer 1995). These communities were subsequently able to take advantage of public pressure exerted through social movements in order to gain broader acceptance for common security. In Germany, for example, “in response to social movement pressure, German social organizations such as churches and trade unions quickly supported the ideas promoted by peace researchers and the SPD” (Risse-Kappen 1994: 207). Similar pressures even had an effect on the Reagan administration. As Risse-Kappen notes: When the Reagan administration brought hard-liners into power, the US arms control community was removed from policy influence. It was the American peace movement and what became known as the “freeze campaign” that revived the arms control process together with pressure from the European allies. (Risse-Kappen 1994: 205; also Cortright 1993: 90-110). Although it would be difficult to sustain a claim that the combination of critical movements and intellectuals persuaded the Reagan government to adopt the rhetoric and substance of common security in its entirety, it is clear that it did at least have a substantial impact on ameliorating U.S. behavior. The most dramatic and certainly the most unexpected impact of alternative defense ideas was felt in the Soviet Union. Through various East-West links, which included arms control institutions, Pugwash conferences, interparty contacts, and even direct personal links, a coterie of Soviet policy analysts and advisers were drawn toward common security and such attendant notions as “nonoffensive defense” (these links are detailed in Evangelista 1995; Kaldor 1995; Checkel 1993; Risse-Kappen 1994; Landau 1996 and Spencer 1995 concentrate on the role of the Pugwash conferences). This group, including Palme Commission member Georgii Arbatov, Pugwash attendee Andrei Kokoshin , and Sergei Karaganov, a senior adviser who was in regular contact with the Western peace researchers Anders Boserup and Lutz Unterseher (Risse-Kappen 1994: 203), then influenced Soviet leader Mikhail Gorbachev. Gorbachev’s subsequent championing of common security may be attributed to several factors. It is clear, for example, that new Soviet leadership had a strong interest in alleviating tensions in East-West relations in order to facilitate much-needed domestic reforms (“the interaction of ideas and material reality”). But what is significant is that the Soviets’ commitment to common security led to significant changes in force sizes and postures. These in turn aided in the winding down of the Cold War, the end of Soviet domination over Eastern Europe, and even the collapse of Russian control over much of the territory of the former Soviet Union. At the present time, in marked contrast to the situation in the early 1980s, common security is part of the common sense of security discourse. As MccGwire points out, the North Atlantic Treaty Organization (NATO) (a common defense pact) is using the rhetoric of common security in order to justify its expansion into Eastern Europe (MccGwire 1997). This points to an interesting and potentially important aspect of the impact of ideas on politics. As concepts such as common security, and collective security before it (Claude 1984: 223-260), are adopted by governments and military services, they inevitably become somewhat debased. The hope is that enough of the residual meaning can survive to shift the parameters of the debate in a potentially progressive direction. Moreover, the adoption of the concept of common security by official circles provides critics with a useful tool for (immanently) critiquing aspects of security policy (as MccGwire 1997 demonsrates in relation to NATO expansion). The example of common security is highly instructive. First, it indicates that critical intellectuals can be politically engaged and play a role – a significant one at that – in making the world a better and safer place. Second, it points to potential future addressees for critical international theory in general, and critical security studies in particular. Third, it also underlines the role of ideas in the evolution in society. CRITICAL SECURITY STUDIES AND THE THEORY-PRACTICE NEXUS Although most proponents of critical security studies reject aspects of Gramsci’s theory of organic intellectuals, in particular his exclusive concentration on class and his emphasis on the guiding role of the party, the desire for engagement and relevance must remain at the heart of their project. The example of the peace movement suggests that critical theorists can still play the role of organic intellectuals and that this organic relationship need not confine itself to a single class; it can involve alignment with different coalitions of social movements that campaign on an issue or a series of issues pertinent to the struggle for emancipation (Shaw 1994b; R. Walker 1994). Edward Said captures this broader orientation when he suggests that critical intellectuals “are always tied to and ought to remain an organic part of an ongoing experience in society: of the poor, the disadvantaged, the voiceless, the unrepresented, the powerless” (Said 1994: 84). In the specific case of critical security studies, this means placing the experience of those men and women and communities for whom the present world order is a cause of insecurity rather than security at the center of the agenda and making suffering humanity rather than raison d’etat the prism through which problems are viewed. Here the project stands full-square within the critical theory tradition. If “all theory is for someone and for some purpose,” then critical security studies is for “the voiceless, the unrepresented, the powerless,” and its purpose is their emancipation. The theoretical implications of this orientation have already been discussed in the previous chapters. They involve a fundamental reconceptualization of security with a shift in referent object and a broadening of the range of issues considered as a legitimate part of the discourse. They also involve a reconceptualization of strategy within this expanded notion of security. But the question remains at the conceptual level of how these alternative types of theorizing – even if they are self-consciously aligned to the practices of critical or new social movements, such as peace activism, the struggle for human rights, and the survival of minority cultures – can become “a force for the direction of action.” Again, Gramsci’s work is insightful. In the Prison Notebooks, Gramsci advances a sophisticated analysis of how dominant discourses play a vital role in upholding particular political and economic orders, or, in Gramsci’s terminology, “historic blocs” (Gramsci 1971: 323-377). Gramsci adopted Machiavelli’s view of power as a centaur, ahlf man, half beast: a mixture of consent and coercion. Consent is produced and reproduced by a ruling hegemony that holds sway through civil society and takes on the status of common sense; it becomes subconsciously accepted and even regarded as beyond question. Obviously, for Gramsci, there is nothing immutable about the values that permeate society; they can and do change. In the social realm, ideas and institutions that were once seen as natural and beyond question (i.e., commonsensical) in the West, such as feudalism and slavery, are now seen as anachronistic, unjust, and unacceptable. In Marx’s well-worn phrase, “All that is solid melts into the air.” Gramsci’s intention is to harness this potential for change and ensure that it moves in the direction of emancipation. To do this he suggests a strategy of a “war of position” (Gramsci 1971: 229-239). Gramsci argues that in states with developed civil societies, such as those in Western liberal democracies, any successful attempt at progressive social change requires a slow, incremental, even molecular, struggle to break down the prevailing hegemony and construct an alternative counterhegemony to take its place. Organic intellectuals have a crucial role to play in this process by helping to undermine the “natural,” “commonsense,” internalized nature of the status quo. This in turn helps create political space within which alternative conceptions of politics can be developed and new historic blocs created. I contend that Gramsci’s strategy of a war of position suggests an appropriate model for proponents of critical security studies to adopt in relating their theorizing to political practice. THE TASKS OF CRITICAL SECURITY STUDIES If the project of critical security studies is conceived in terms of war of position, then the main task of those intellectuals who align themselves with the enterprise is to attempt to undermine the prevailing hegemonic security discourse. This may be accomplished by utilizing specialist information and expertise to engage in an immanent critique of the prevailing security regimes, that is, comparing the justifications of those regimes with actual outcomes. When this is attempted in the security field, the prevailing structures and regimes are found to fail grievously on their own terms. Such an approach also involves challenging the pronouncements of those intellectuals, traditional or organic, whose views serve to legitimate, and hence reproduce, the prevailing world order. This challenge entails teasing out the often subconscious and certainly unexamined assumptions that underlie their arguments while drawing attention to the normative viewpoints that are smuggled into mainstream thinking about security behind its positivist façade. In this sense, proponents of critical security studies approximate to Foucault’s notion of “specific intellectuals” who use their expert knowledge to challenge the prevailing “regime of truth” (Foucault 1980: 132). However, critical theorists might wish to reformulate this sentiment along more familiar Quaker lines of “speaking truth to power” (this sentiment is also central to Said 1994) or even along the eisteddfod lines of speaking “truth against the world.” Of course, traditional strategists can, and indeed do, sometimes claim a similar role. Colin S. Gray, for example, states that “strategists must be prepared to ‘speak truth to power’” (Gray 1982a: 193). But the difference between Gray and proponents of critical security studies is that, whereas the former seeks to influence policymakers in particular directions without questioning the basis of their power, the latter aim at a thoroughgoing critique of all that traditional security studies has taken for granted. Furthermore, critical theorists base their critique on the presupposition, elegantly stated by Adorno, that “the need to lend suffering a voice is the precondition of all truth” (cited in Jameson 1990: 66). The aim of critical security studies in attempting to undermine the prevailing orthodoxy is ultimately educational. As Gramsci notes, “every relationship of ‘hegemony’ is necessarily a pedagogic relationship” (Gramsci 1971: 350; see also the discussion of critical pedagogy in Neufeld 1995: 116-121). Thus, by criticizing the hegemonic discourse and advancing alternative conceptions of security based on different understandings of human potentialities, the approach is simultaneously playing apart in eroding the legitimacy of the ruling historic bloc and contributing to the development of a counterhegemonic position. There are a number of avenues of avenues open to critical security specialists in pursuing this educational strategy. As teachers, they can try to foster and encourage skepticism toward accepted wisdom and open minds to other possibilities. They can also take advantage of the seemingly unquenchable thirst of the media for instant pundistry to forward alternative views onto a broader stage. Nancy Fraser argues: “As teachers, we try to foster an emergent pedagogical counterculture …. As critical public intellectuals we try to inject our perspectives into whatever cultural or political public spheres we have access to” (Fraser 1989: 11). Perhaps significantly, support for this type of emancipatory strategy can even be found in the work of the ultrapessimistic Adorno, who argues: In the history of civilization there have been not a few instances when delusions were healed not by focused propaganda, but, in the final analysis, because scholars, with their unobtrusive yet insistent work habits, studied what lay at the root of the delusion. (cited in Kellner 1992: vii) Such “unobtrusive yet insistent work” does not in itself create the social change to which Adorno alludes. The conceptual and the practical dangers of collapsing practice into theory must be guarded against. Rather, through their educational activities, proponent of critical security studies should aim to provide support for those social movements that promote emancipatory social change. By providing a critique of the prevailing order and legitimating alternative views, critical theorists can perform a valuable role in supporting the struggles of social movements. That said, the role of theorists is not to direct and instruct those movements with which they are aligned; instead, the relationship is reciprocal. The experience of the European, North American, and Antipodean peace movements of the 1980s shows how influential social movements can become when their efforts are harnessed to the intellectual and educational activity of critical thinkers. For example, in his account of New Zealand’s antinuclear stance in the 1980s, Michael C. Pugh cites the importance of the visits of critical intellectuals such as Helen Caldicott and Richard Falk in changing the country’s political climate and encouraging the growth of the antinuclear movement (Pugh 1989: 108; see also COrtright 1993: 5-13). In the 1980s peace movements and critical intellectuals interested in issues of security and strategy drew strength and succor from each other’s efforts. If such critical social movements do not exist, then this creates obvious difficulties for the critical theorist. But even under these circumstances, the theorist need not abandon all hope of an eventual orientation toward practice. Once again, the peace movement of the 1980s provides evidence of the possibilities. At that time, the movement benefited from the intellectual work undertaken in the lean years of the peace movement in the late 1970s. Some of the theories and concepts developed then, such as common security and nonoffensive defense, were eventually taken up even in the Kremlin and played a significant role in defusing the second Cold War. Those ideas developed in the 1970s can be seen in Adornian terms of the a “message in a bottle,” but in this case, contra Adorno’s expectations, they were picked up and used to support a program of emancipatory political practice. Obviously, one would be naïve to understate the difficulties facing those attempting to develop alternative critical approaches within academia. Some of these problems have been alluded to already and involve the structural constraints of academic life itself. Said argues that many problems are caused by what he describes as the growing “professionalisation” of academic life (Said 1994: 49-62). Academics are now so constrained by the requirements of job security and marketability that they are extremely risk-averse. It pays – in all senses – to stick with the crowd and avoid the exposed limb by following the prevalent disciplinary preoccupations, publish in certain prescribed journals, and so on. The result is the navel gazing so prevalent in the study of international relations and the seeming inability of security specialists to deal with the changes brought about by the end of the Cold War (Kristensen 1997 highlights the search of U.S. nuclear planners for “new targets for old weapons”). And, of course, the pressures for conformism are heightened in the field of security studies when governments have a very real interest in marginalizing dissent. Nevertheless, opportunities for critical thinking do exist, and this thinking can connect with the practices of social movements and become a “force for the direction of action.” The experience of the 1980s, when, in the depths of the second Cold War, critical thinkers risked demonization and in some countries far worse in order to challenge received wisdom, thus arguably playing a crucial role in the very survival of the human race, should act as both an inspiration and a challenge to critical security studies.

### 2NC RotJ

#### The Judge is a specific intellectual challenging the 1AC's discourse – this is someone who rejects generalities and finds weak points that rely on inaccurate modes of thought. You do not know specifically which direction but rather than asking ‘what is right?’ we embrace a constant problemetazation of the present – that’s Owen.

#### We must set aside the quest for blueprints in order to rethink our relationship to action

RBJ **Walker**, BA Wales, MA PhD Queen's University, Prof of Poli Sci Univ of Victoria, Prof of IR @ SPIRE, editor Millennium, Alternatives etc, One World Many Worlds: Struggles for a Just World Peace, 19**88**

Enquiry into human affairs, like all scientific enquiry, depends on a capacity to ask the right questions. This is sometimes forgotten by those who equate scientific analysis with the mechanical application **of supposedly objective research techniques**. I suggest that many of the most crucial questions are being asked and explored by critical social movements. To try to understand these questions is necessarily to follow an alternative critical logic. Moreover, enquiry into human affairs, **unlike enquiry in the sciences of inert matter** on which our dominant images of legitimate knowledge have come to be based, depends in large part on a capacity to interpret the meanings, values, and aspirations that guide the way people act. Historical change is both reflected in and affected by the way people grope for new meanings, new languages, new ways of interpreting their place in the world. A clearer articulation of the most pressing questions of the age can arise from listening carefully to the meanings, values, and aspirations that guide contemporary movements struggling to reconstruct the world in which they live. In this sense, critical social movements discover in practice what many scholars and academics discover more theoretically: The conventional categories of understanding seem out of joint with the times. For scholars and activists alike, it has become necessary to refuse received **conceptual boundaries, to search for new forms of understanding, and to develop a clearer sense of the complex relationships between theory and practice,** knowing and being. I do not claim in this book to give a conclusive insight into the major problems of the age. Nor do I have any straightforward answers to the perennial question, "What is to be done?" Indeed, I argue that **answers to this question formulated as blueprints for the future, are inherently undesirable**. A just world peace must grow out of the ongoing practices of people everywhere, not be molded by those **who claim to have a god's-eye view of what is going on**. It is sometimes **important to resist the inevitable demand for hard-nosed, concrete solutions to particular problems.** Credibility in contemporary political debate **too often depends on a willingness to present policy options** that might be carried out by existing governments and institutions. It is not that policy options are unavailable. On the contrary, whether about more-sensible arms control procedures, removing the burden of international debt, restructuring international trade or commodity pricing arrangements, and so on, policies that would undoubtedly improve the lot of millions of people are regularly aired in reports, international gatherings, and the more-serious news media. Although many such proposals deserve widespread support, the transformations necessary for a just world peace cannot come from government policies alone, no matter how enlightened these governments may be. Under present circumstances **the question "What is to be done?" invites a degree of arrogance that is all too visible** in the behavior of the dominant political forces of our time. It is an arrogance that is inconsistent with the kind of empirical evidence we have before us. This evidence requires a willingness to face up to the uncertainties of the age**, not with the demand for instant solutions, but with a more modest openness to the potentials inherent in what is already going on**. The most pressing questions of the age call not only for concrete policy options to be offered to existing elites and institutions **but also, and more crucially, for a serious rethinking of the ways in which it is possible for human beings to live together**. The call for a just world peace must be also a call for the reconstruction of political life. In this book I suggest that important insights into this deeper process are emerging from practices that are now under way. These insights make it possible to formulate responses to questions about what must be done **without capitulating to the illusion—so often dressed up in the pretentious and dangerous claim to realism—that our future lies in the hands of existing elites alone**. (6-8)

## 1NR – T, Space Col

### 2NC Multi-Condo Good

**Condo’s good**

**1. Neg flex – can’t use kritiks and counterplans and test the aff from different angles**

**2. Information processing – multiple choices make for more tactile and harder debate – fosters 2ac tech skills**

**3. Real-world – policy-makers aren’t forced to stick to their opinions if they realize a flaw**

**[4. Research – sides have to learn a broader variety of issues instead of relying on generics**

**5. Checks new affs – neg needs to be able to test multiple options on the fly]**

**Counter-interpretation – we get 1 CP 1 K** **– it’s a logical fixed limit that mitigates their offense**

**Not a voter – just a reason to stick us with the CP – solves 1AR allocation**

**AT: Strat Skew**

**No reason we skewed you any more than disads, T, or impact turns would – our advocacies aren’t contradictory**

**Err neg – they have no counter interpretation**

**Counter-Interp: 2NC**

**Restrictions must be a direct governmental limitation – that’s Viterbo.**

**This is best**

**-- Limits – any other interpretation allows regulations and indirect effects to be topical. This explodes the topic allowing affs that change the relative economics of production, such as streamlining the permitting process on lands already open to production, or reducing the fees that are levied to obtain a permit. This makes the topic unmanageable for the neg.**

**-- Education -- our interpretation provides the best access to topic education. There is sufficient aff flexibility – including affs that remove restrictions on offshore drilling or federal lands for oil and gas, master limited partnerships for renewables, all direct restrictions on energy production. Aff shifts away form actual restrictinos and focuses on regulations**

**-- Restriction means a prohibition – not permitted under any circumstances**

**Northglenn 11** (City of Northglenn Zoning Ordinance, “Rules of Construction – Definitions”, http://www.northglenn.org/municode/ch11/content\_11-5.html)

Section 11-5-3. Restrictions. As used in this Chapter 11 of the Municipal Code, the **term "restriction**" shall mean a prohibitive regulation. Any use, activity, operation, building, structure or thing which is the subject of a restriction is prohibited, and no such use, activity, operation, building, structure or thing shall be **authorized by any permit or license**.

**Violation: 2NC**

**Aff doesn’t reduce a direct limitation – it is an indirect regulation, that’s Viterbo.**

**And they have conceded that it needs authorization- nothing preventing it**

**Restriction means a prohibition – not permitted under any circumstances**

**Northglenn 11** (City of Northglenn Zoning Ordinance, “Rules of Construction – Definitions”, http://www.northglenn.org/municode/ch11/content\_11-5.html)

Section 11-5-3. Restrictions. As used in this Chapter 11 of the Municipal Code, the **term "restriction**" shall mean a prohibitive regulation. Any use, activity, operation, building, structure or thing which is the subject of a restriction is prohibited, and no such use, activity, operation, building, structure or thing shall be **authorized by any permit or license**.

**Regulations and restrictions are distinct – the aff reduces regulations, not restrictions**

**Shackleford 17** (Florida SC Justice Opinion in ATLANTIC COAST LINE RAILROAD COMPANY, A CORPORATION, et al., Plaintiff in Error, v. THE STATE OF FLORIDA, Defendant in Error~[NO DOCKET NUMBER~]SUPREME COURT OF FLORIDA73 Fla. 609; 74 So. 595; 1917 Fla. LEXIS 487March 12, 1917; Petition for Rehearing Denied March 17, 1917)

There would seem to be no occasion to discuss whether or not the Railroad Commissioners had the power and authority to make the order, requiring the three specified railroads running into the City of Tampa to erect a union passenger station in such city, which is set out in the declaration in the instant case and which we have copied above. [\*\*\*29] It is sufficient to say that under the reasoning and the authorities cited in State v. Atlantic Coast Line R. Co., 67 Fla. 441, 458, 63 South. Rep. 729, 65 South. Rep. 654, and State v. Jacksonville Terminal [\*631] Co., supra, it would seem that HN14the Commissioners had power and authority. The point which we are required to determine is whether or not the Commissioners were given the authority to impose the fine or penalty upon the three railroads for the recovery of which this action is brought. In order to decide this question we must examine Section 2908 of the General Statutes of 1906, which we have copied above, in the light of the authorities which we have cited and from some of which we have quoted. It will be observed that the declaration alleges that the penalty imposed upon the three railroads was for the violation of what is designated as "Order No. 282," which is set out and which required such railroads to erect and complete a union depot at Tampa within a certain specified time. If the Commissioners had the authority to make such order, it necessarily follows that they could enforce a compliance with the same by appropriate proceedings in the courts, but [\*\*\*30] it does not necessarily follow that they had the power and authority to penalize the roads for a failure to comply therewith. That is a different matter. HN15Section 2908 of the General Statutes of 1906, which originally formed Section 12 of Chapter 4700 of the Laws of Florida, (Acts of 1899, p. 86), expressly authorizes the imposition of a penalty by the Commissioners upon "any railroad, railroad company or other common carrier doing business in this State," for "a violation or disregard of any rate, schedule, rule or regulation, provided or prescribed by said commission," or for failure "to make any report required to be made under the provisions of this Chapter," or for the violation of "any provision of this Chapter." It will be observed that the word "Order" is not mentioned in such section. Are the other words used therein sufficiently comprehensive to embrace an order made by the Commissioners, such as the one now under consideration? [\*632] It could not successfully be contended, nor is such contention attempted, that this order is covered by or embraced within the words "rate," "schedule" or "any report,' therefore we may dismiss these terms from our consideration and [\*\*\*31] direct our attention to the words "rule or regulation." As is frankly stated in the brief filed by the defendant in error: "It is admitted that an order for the erection of a depot is not a 'rate' or 'schedule' and if it is not a 'rule' or 'regulation' then there is no power in the Commissioners to enforce it by the imposition of a penalty." It is earnestly insisted that the words "rule or regulation" are sufficiently comprehensive to embrace such an order and to authorize the penalty imposed, and in support of this contention the following authorities are cited: Black's Law Dictionary, defining regulation and order; Rapalje & Lawrence's Law Dictionary, defining rule; Abbott's Law Dictionary, defining rule; Bouvier's Law Dictionary, defining order and rule [\*\*602] of court; Webster's New International Dictionary, defining regulation; Curry v. Marvin, 2 Fla. 411, text 515; In re Leasing of State Lands, 18 Colo. 359, 32 Pac. Rep. 986; Betts v. Commissioners of the Land Office, 27 Okl. 64, 110 Pac. Rep. 766; Carter V. Louisiana Purchase Exposition Co., 124 Mo. App. 530, 102 S.W. Rep. 6, text 9; 34 Cyc. 1031. We have examined all of these authorities, as well as those cited by the [\*\*\*32] plaintiffs in error and a number of others, but shall not undertake an analysis and discussion of all of them. While it is undoubtedly true that the words, rule, regulation and order are frequently used as synonyms, as the dictionaries, both English and law, and the dictionaries of synonyms, such as Soule's show, it does not follow that these words always mean the same thing or are interchangeable at will. It is well known that the same word used in different contexts may mean a different thing by virtue of the coloring which the word [\*633] takes on both from what precedes it in the context and what follows after. Thus in discussing the proper constructions to be placed upon the words "restrictions and regulations" as used in the Constitution of this State, then in force, Chap. 4, Sec. 2, No. 1, of Thompson's Digest, page 50, this court in Curry v. Marvin, 2 Fla. 411, text 415, which case is cited to us and relied upon by both the parties litigant, makes the following statement: "The **word restriction** is defined by the best lexicographers to mean **limitation**, confinement within bounds, and would seem, as used in the constitution, to apply to the **amount** and to the time [\*\*\*33] within which an appeal might to be taken, or a writ of error sued out. The **word regulation** has a different signification -- it means method, and is defined by Webster in his Dictionary, folio 31, page 929, to be 'a rule or order prescribed by a superior for the management of some business, or for the government of a company or society.' This more properly perhaps applies to the **mode and form** of proceeding in taking and prosecuting appeals and writs of error. By the use of both of those terms, we think that something more was intended than merely regulating the mode and form of proceedings in such cases." Thus, in Carter v. Louisiana Purchase Exposition Co., 124 Mo. App. 530, text 538, 102 S.W. Rep. 6, text 9, it is said, "The definition of a rule or order, which are synonymous terms, include commands to lower courts or court officials to do ministerial acts." In support of this proposition is cited 24 Amer. & Eng. Ency. of Law 1016, which is evidently an erroneous citation, whether the first or second edition is meant. See the definition of regulate and rule, 24 amer. & Eng. Ency. of Law (2nd Ed.) pages 243 to 246 and 1010, and it will be seen that the two words are not always [\*\*\*34] synonymous, much necessarily depending upon the context and the sense in which the words are used. Also see the discussion [\*634] of the word regulation in 34 Cyc. 1031. We would call especial attention to Morris v. Board of Pilot Commissioners, 7 Del. chan. 136, 30 Atl. Rep. 667, text 669, wherein the following statement is made by the court: "These words 'rule' and the 'order,' when used in a statute, have a definite signification. They are different in their nature and extent. A rule, to be valid, must be general in its scope, and undiscriminating in its application; an order is specific and not limited in its application. The function of an order relates more particularly to the execution or enforcement of a rule previously made." Also see 7 Words & Phrases 6271 and 6272, and 4 Words & Phrases (2nd Ser.) 419, 420. As we held in City of Los Angeles v. Gager, 10 Cal. App. 378, 102 Pac. Rep. 17, "The meaning of the word 'rules' is of wide and varied significance, depending upon the context; in a legal sense it is synonymous with 'laws.'" If Section 2908 had contained the word order, or had authorized the Commissioners to impose a penalty for the violation of any order [\*\*\*35] made by them, there would be no room for construction. The Georgia statute, Acts of 1905, p. 120, generally known as the "Steed Bill," entitled "An act to further extend the powers of the Railroad Commission of this State, and to confer upon the commission the power to regulate the time and manner within which the several railroads in this State shall receive, receipt for, forward and deliver to its destination all freight of every character, which may be tendered or received by them for transportation; to provide a penalty for non-compliance with any and all reasonable rules, regulations and orders prescribed by the said commission in the execution of these powers, and for other purposes," expressly authorized the Railroad Commissioners "to provide a penalty for non-compliance with any and all reasonable rules, regulations and orders prescribed by the said Commision." [\*635] See Pennington v. Douglas, A. & G. Ry. Co., 3 Ga. App. 665, 60 S.E. Rep. 485, which we cited with approval in State v. Atlantic Coast Line R. Co., 56 fla. 617, text 651, 47 South. Rep. 969, 32 L.R.A. (N.S.) 639. Under the reasoning in the cited authorities, especially State v. Atlantic Coast Line R. Co., [\*\*\*36] supra, and Morris v. Board of Pilot Commissioners, we are constrained to hold that the fourth and eighth grounds of the demurrer are well founded and that HN16the Railroad Commissioners were not empowered or authorized to impose a penalty upon the three railroads for failure to comply with the order for the erection of a union depot.

**-- Indirect effects are not restrictions**

**Viterbo 12** (Annamaria, Assistant Professor in International Law – University of Torino, PhD in International Economic Law – Bocconi University and Jean Monnet Fellow – European University Institute, International Economic Law and Monetary Measures: Limitations to States' Sovereignty and Dispute, p. 167)

49 Measures having the **indirect effect** of limiting the ease of acquiring **foreign exchange do not amount to restrictions** (forms or applications to be filled in). The limitation may consist for instance in compulsory waiting periods for exchange.

**Competing Interpretations Good**

**Competing interpretations is best:**

**It’s the only objective standard – they allow for judge intervention and take the debate out of the hands of the debater.**

**Doesn’t cause a race to the bottom – we force debaters to be better at impacting standards which is true for any DA debate.**

**And – they aren’t reasonable – our limits and precision arguments all prove.**

### 1NC – Super Volcanoes

**Super Volcano is all hype**

Perry Michael **Simon**, Perry Michael Simon. Talk radio guy. Editor of the News-Talk-Sports section at AllAccess.com. Editor and writer at Chris Hardwick's Nerdist.com. Former Program Director, Operations Manager, host, and general nuisance at KLSX/Los Angeles, 1/25/**11**

If there’s anything the tabloid press loves almost as much as reality show “celebrities” and horrific crimes, it’s doomsday scenarios. And here’s one in today’s Daily Mail that has a couple of the hallmarks of the truly perfect doomsday tabloid story: It promises spectacular destruction, and there’s absolutely no way to do anything about it if it’s true. The scenario involves a “super-volcano” underneath Yellowstone National Park that hasn’t erupted in 640,000 years. (At least, that’s what they say. The newspaper archives only go back about 560,000 years) According to the article, “It would explode with a force a thousand times more powerful than the Mount St. Helens eruption in 1980. Spewing lava far into the sky, a cloud of plant-killing ash would fan out and dump a layer 10 feet deep up to 1,000 miles away. Two-thirds of the U.S. could become uninhabitable as toxic air sweeps through it, grounding thousands of flights and forcing millions to leave their homes.”That would put a damper on the day. But there’s evidence, not just tabloid reporting, to at least slightly support the theory that LOOK OUT IT’S GONNA BLOW!!!, and it’s from National Geographic, which notes that miles of ground in the park have risen “dramatically,” pushing the ground above the volcano’s caldera to rise up to 2.8 inches a year since 2004. It’s slowed down considerably since 2007, and the scientists take pains to note that the surge in the magma reservoir doesn’t mean an imminent catastrophe, so it’s not really concerning them as much as when they first monitored the rise. Besides, they’ve measured rises and falls there before, with a 7 inch rise in 1976-84 receding 5.5 inches in the ensuing decade. They’re studying what’s going on, and they’re trying to see if there’s a connection between this activity and the many quakes that shake the region. So, in truth, they’re not really saying that North America’s in danger of being covered in toxic ash, only that it COULD happen, possibly, theoretically. You probably don’t have to plan to move to the opposite side of the planet just yet. On the other hand, you might want to keep a few surgical masks and bottles of water on hand, just in case. They won’t help you much, but at least you’ll feel like you’re prepared.

### 2NC – Generic Not Inevitable

**We have 5 billion years to escape the planet – none are so immediate that we need to disregard our impacts**

**Many current technological strategies could solve their threats to survival**

**That’s Williams**

**warming**

#### No brink to their extinction claims.

Shapiro 07 (Robert, staff writer for The Space Review, “Why the moon? Human survival!”, http://www.thespacereview.com/article/832/1) hss

Of course, we have been hearing predictions of Doomsday for years, and we are still here. According to geologists, the eruption of Mt. Toba in Indonesia 71,000 years ago darkened the sky for years. The event caused killed much of plant life on the planet. The famine that resulted caused a severe drop in the human population of that time. The Black Death of the 14th century killed perhaps one-third of the population of Europe and the great flu epidemic of 1918 claimed an estimated 40 million victims. Despite these disasters, and others such as global wars, humanity has muddled through and even prospered. Why should things be different now?

**Even if earth will no longer be habitable, it will be millions of years until extinction**

**Universe Today** (online space guide, cites studies from universities) **’09** “HowLong Will Life Survive on Earth?”February 13th, 2009http://www.universetoday.com/25367/how-long-will-life-survive-on-earth/

It feels like the Earth is forever. But we know it formed around 4.5 billion years ago, and it will last another 7.5 billion years or so, when the Sun becomes a red giant, and probably destroying the Earth. But our climate will become unlivable long before that. According to Peter Ward and Robert Brownlee, in their book, The Life and Death of Planet Earth, things are going to heat up much, much earlier. That’s because the energy output coming the Sun is gradually increasing. Not enough to change the climate in our lifetimes, or even millions of years. But in the span of hundreds of millions of years, things are going to heat up. A model developed by researchers at Pennsylvania State University calculated that the energy coming from the Sun will heat up the planet so much that the oceans will evaporate within a billion years or so. But this is just the end of a series of terrible things that will happen to the planet as the Sun’s energy output increases. As the climate becomes warmer, the cycle of silicate rock weather speeds up, removing carbon dioxide from the atmosphere and sequestering it as calcium carbonate in the oceans. Without carbon dioxide, plants won’t be able to survive, and everything relying on them dies too.

### EXT. Disposible Earth

#### Focusing on space colonization creates a collective mindset on Earth that it is disposable, exacerbating ecological problems causing extinction. – that’s Williams

#### It also causes a self fulfilling prophecy – belief that we should always flee from our problems causes those problem to rematerialize wherever we go – the plan recreates those problems – that’s Williams

**Expanding into space fosters a fundamental disconnection from the Earth**

Cockell **07** (Charles S., Ph.D., Professor and Chair of Geomicrobiology, Open University, Space on Earth: Saving Our World By Seeking Others, p. 122)

**The idea that we should protect the Earth because it helps us settle space is the easiest idea to understand. We might also pro­tect the Earth for its own intrinsic worth, not just because we think animals, plants and microbes should have a right to con­tinue to exist, but because the Earth has a universal intrinsic worth.** The possibility that Earth might have an intrinsic value within a space-faring environmental ethic has a great deal of long-term importance. **As humanity moves away and explores new regions of space, its connection with Earth weakens. For example, imagine a space-faring civilization that gathers all of its resources from asteroids and lives amongst these objects. As few of these new space-dwelling pioneers will visit the Earth, then their sense of the intrinsic worth of the planet will also fade away.** It will be to them a distant world, a curiosity.

#### Colonization takes focus away from problems on Earth

#### Williams 10 (Lynda, M.S. in Physics and a physics faculty member at Santa Rose Junior College, “Irrational Dreams of Space Colonization”, Peace Review: A Journal of Social Justice, 22.1, Spring, pg 7-8)

We have much to determine on planet Earth before we launch willy-nilly into another space race that would inevitably result in environmental disaster and include a new arms race in the heavens. If we direct our intellectual and technological resources toward space exploration without consideration of the environmental and political consequences, what is left behind in the wake? The hype surrounding space exploration leaves a dangerous vacuum in the collective consciousness of solving the problems on Earth**.** If we accept the inevitability of the destruction of Earth and its biosphere, then it is perhaps not too surprising that many peopl**e** grasp at the last straw and look toward the heavens for solutions and a possible resolution. Many young scientists are perhaps fueling the prophesy of our planetary destruction by dreaming of lunar and/or Martian bases to save humanity, rather than working on the serious environmental challenges that we face on Earth.

### 2NC – Asteroid Terror Overview

**Space colonization leads to technology that develops asteroid deflection technology – that allows them to do bad things –**

**The DA o/w and turns the case**

**A. Probability- Illogical madmen will get the ability to move asteroids – terrorism turns into a whole new scale of scary- think about the craziest people in the world – what if they had the ability to accurately track asteroids and position them above certain spots and hurl them towards the earth – the likelihood of that is 10^5 – that’s sagan and ostro – it also causes extinction – Here’s comparative evidence that proves this argument**

Sagan 97 — Carl Sagan, Professor and Director of the Laboratory for Planetary Studies at Cornell University, winner of the Oersted Medal, two NASA Distinguished Public Service Medals, the Pulitzer Prize for General Non-Fiction, and the National Academy of Sciences Public Welfare Medal, holds a Ph.D. in Astronomy and Astrophysics from the University of Chicago, 1997 (“The Marsh of Camarina,” Pale Blue Dot: A Vision of the Human Future in Space, Published by Ballantine Books, ISBN 0345376595, p. kindle)

The foregoing are examples of inadvertence. But there’s another kind of peril: We are sometimes told that this or that invention would of course not be misused. No sane person would be so reckless. This is the “only a madman” argument. Whenever I hear it (and it’s often trotted out in such debates), I remind myself that **madmen really exist**. Sometimes they achieve the highest levels of political power in modern industrial nations. This is the century of Hitler and Stalin, tyrants who posed the gravest dangers not just to the rest of the human family, but to their own people as well. In the winter and spring of 1945, Hitler ordered Germany to be destroyed—even “what the people need for elementary survival”—because the surviving Germans had “betrayed” him, and at any rate were “inferior” to those who had already died. If Hitler had had nuclear weapons, the threat of a counterstrike by Allied nuclear weapons, had there been any, is unlikely to have dissuaded him. It might have encouraged him. Can we humans be trusted with **civilization-threatening technologies?** If the chance is almost one in a thousand that much of the human population will be killed by an impact in the next century, isn’t it **more likely that asteroid deflection technology will get into the wrong hands** in another century—some misanthropic sociopath like a Hitler or a Stalin eager to kill everybody, a megalomaniac lusting after “greatness” and “glory,” a victim of ethnic violence bent on revenge, someone in the grip of unusually severe testosterone poisoning, some religious fanatic hastening the Day of Judgment, or just technicians incompetent or insufficiently vigilant in handling the controls and safeguards? **Such people exist. The risks seem far worse than the benefits, the cure worse than the disease**. The cloud of near-Earth asteroids through which the Earth plows may constitute a modern Camarine marsh.

**B. Timeframe – They have the ability to get the tech now – but the plan makes them able to access all of their shit**

**If it is close, timeframe is the trump card—vote neg.**

Sagan 97 — Carl Sagan, Professor and Director of the Laboratory for Planetary Studies at Cornell University, winner of the Oersted Medal, two NASA Distinguished Public Service Medals, the Pulitzer Prize for General Non-Fiction, and the National Academy of Sciences Public Welfare Medal, holds a Ph.D. in Astronomy and Astrophysics from the University of Chicago, 1997 (“The Marsh of Camarina,” Pale Blue Dot: A Vision of the Human Future in Space, Published by Ballantine Books, ISBN 0345376595, p. kindle)

Meanwhile we must still face the deflection dilemma. If we develop and deploy this technology, it may do us in. If we don’t, some asteroid or comet may do us in. **The resolution of the dilemma hinges**, I think, **on the fact that the likely timescales of the two dangers are very different—short for the former, long for the latter**.

#### C. Strongly err negative—misuse of technology is empirically likely.

Sagan 97 — Carl Sagan, Professor and Director of the Laboratory for Planetary Studies at Cornell University, winner of the Oersted Medal, two NASA Distinguished Public Service Medals, the Pulitzer Prize for General Non-Fiction, and the National Academy of Sciences Public Welfare Medal, holds a Ph.D. in Astronomy and Astrophysics from the University of Chicago, 1997 (“The Marsh of Camarina,” Pale Blue Dot: A Vision of the Human Future in Space, Published by Ballantine Books, ISBN 0345376595, p. kindle)

**We have a tendency to minimize the dangers of new technologies**. A year before the Chernobyl disaster, a Soviet nuclear power industry deputy minister was asked about the safety of Soviet reactors, and chose Chernobyl as a particularly safe site. The average waiting time to disaster, he confidently estimated, was a hundred thousand years. Less than a year later … devastation. Similar reassurances were provided by NASA contractors the year before the Challenger disaster: You would have to wait ten thousand years, they estimated, for a catastrophic failure of the shuttle. One year later … heartbreak. Chlorofluorocarbons (CFCs) were developed specifically as a completely safe refrigerant—to replace ammonia and other refrigerants that, on leaking out, had caused illness and some deaths. Chemically inert, nontoxic (in ordinary concentrations), odorless, tasteless, nonallergenic, nonflammable, CFCs represent a brilliant technical solution to a well-defined practical problem. They found uses in many other industries besides refrigeration and air conditioning. But, as I described above, the chemists who developed CFCs overlooked one essential fact—that the molecules’ very inertness guarantees that they are circulated to stratospheric altitudes and there cracked open by sunlight, releasing chlorine atoms which then attack the protective ozone layer. Due to the work of a few scientists, the dangers may have been recognized and averted in time. We humans have now almost stopped producing CFCs. We won’t actually know if we’ve avoided real harm for about a century; that’s how long it takes for all the CFC damage to be completed. Like the ancient Camarinans, **we make mistakes**.\* **Not only do we often ignore the warnings of the oracles; characteristically we do not even consult them**

### Asteroid Terror- AT: Norms Check

#### International norms won’t deter intentional misuse.

Sagan 97 — Carl Sagan, Professor and Director of the Laboratory for Planetary Studies at Cornell University, winner of the Oersted Medal, two NASA Distinguished Public Service Medals, the Pulitzer Prize for General Non-Fiction, and the National Academy of Sciences Public Welfare Medal, holds a Ph.D. in Astronomy and Astrophysics from the University of Chicago, 1997 (“The Marsh of Camarina,” Pale Blue Dot: A Vision of the Human Future in Space, Published by Ballantine Books, ISBN 0345376595, p. kindle)

Tracking asteroids and comets is prudent, it’s good science, and it doesn’t cost much. But, knowing our weaknesses, why would we even consider now developing the technology to deflect small worlds? For safety, shall we imagine this technology in the hands of many nations, each providing checks and balances against misuse by another? This is nothing like the old nuclear balance of terror. It hardly inhibits some madman intent on global catastrophe to know that if he does not hurry, a rival may beat him to it. How confident can we be that the community of nations will be able to detect a cleverly designed, clandestine asteroid deflection in time to do something about it? If such a technology were developed, can any international safeguards be envisioned that have a reliability commensurate with the risk?

### 1NC – Probes

**Space colonization makes probes inevitable**

Rees 2001 **(**Martin Rees, Royal Society Research Prof. @ Cambridge & Astronomer Royal of Great Britain, Our Cosmic Habitat, p. 18 JT/JEDI)

**But hope has not been abandoned. Over the next few years, an armada of space probes will be launched toward the Red Planet to analyze its surface, to fly over it, and, in later missions, to return samples to Earth**. In 2004, the European Space Agency’s “Huygens” probe, part of the cargo of NASA’s Cassini mission to Saturn, will parachute into Titan’s atmosphere, seeking anything that might be alive on this giant moon. Other **possible sites for life are Jupiter’s frozen moons, Europa and Ganymede: there are plans to land submersible probes that could seek life beneath their ice-covered oceans.**

**Interstellar probes destroy the universe.**

Genta & Rycroft 03 **(G**iancarlo Genta, Technical Univ. of Turin, Italy & Michael Rycroft, Int’l Space Univ., Strasbourg, France & DeMontfort Univ, Leicaster, UK, SPACE, THE FINAL FRONTIER?, p. 298 JT/JEDI)

**Another, more important point has to be addressed. Assuming that such intelligent machines can be built, is it morally acceptable to do so? Should self-replicating machines fill the Universe? That question has caused fierce arguments. Carl Sagan believed the answer to be no. The advisable line for a technological civilisation is that of banning the construction of interstellar Von Neumann machines and strictly limiting their use on its home planet. If the argument of Frank Tipler is accepted, such an invention would jeopardise the whole Universe**; **the control and the destruction of interstellar Von Neumann machines would then become a task with which all civilised countries – the more technologically advanced, in particular – would in some way have to be involved.**

### 2NC – Medical Problems

**Tech doesn’t exist to colonize space –**

1. **propulsion doesn’t exist.**
2. **High launch costs**
3. **Not life sustainable -that’s eaglan and Kreso**

**All previous human spaceflight is insignificant – long term colonization is still infeasible.**

**Launius 10** – (2010, Roger, PhD, Curator, Planetary Exploration Programs, National Air and Space Museum, expert on Aerospace history, fellow and board member of the American Astronautical Society, “Can we colonize the solar system? Human biology and survival in the extreme space environment,” Endeavour Volume 34, Issue 3, September 2010, Pages 122-129, science direct

Although microbial life might survive the extreme conditions of space, for Homo sapien sapiens the space environment remains remarkably dangerous to life. One space life scientist, Vadim Rygalov, remarked that ensuring human life during spaceflight was largely about providing the basics of human physiological needs. From the most critical – meaning that its absence would cause immediate death, to the least critical – these include such constants available here on Earth of atmospheric pressure, breathable oxygen, temperature, drinking water, food, gravitational pull on physical systems, radiation mitigation, and others of a less immediate nature. As technologies, and knowledge about them, stand at this time, humans are able to venture into space for short periods of less than a year only by supplying all of these needs either by taking everything with them (oxygen, food, air, etc.) or creating them artificially (pressurized vehicles, centrifugal force to substitute for gravity, etc.).10 Spaceflight would be much easier if humans could go into hibernation during the extremes of spaceflight, as did the Streptococcus mitis bacteria. Resolving these issues has proven difficult but not insurmountable for such basic spaceflight activities as those undertaken during the heroic age of space exploration when the United States and the Soviet Union raced to the Moon. Overcoming the technological hurdles encountered during the Mercury, Gemini, and Apollo programs were child's play in comparison to the threat to human life posed by long duration, deep space missions to such places as Mars. Even the most sophisticated of those, the lunar landings of Project Apollo, were relatively short camping trips on an exceptionally close body in the solar system, and like many camping trips undertaken by Americans the astronauts took with them everything they would need to use while there. This approach will continue to work well until the destination is so far away that resupply from Earth becomes highly problematic if not impossible if the length of time to be gone is so great that resupply proves infeasible. There is no question that the U.S. could return to the Moon in a more dynamic and robust version of Apollo; it could also build a research station there and resupply it from Earth while rotating crews and resupplying from Earth on a regular basis. In this instance, the lunar research station might look something like a more sophisticated and difficult to support version of the Antarctic research stations. A difficult challenge, yes; but certainly it is something that could be accomplished with presently envisioned technologies.11 The real difficulty is that at the point a lunar research station becomes a colony profound changes to the manner in which humans interact with the environment beyond Earth must take place. Countermeasures for core challenges – gravity, radiation, particulates, and ancillary effects – provide serious challenges for humans engaged in space colonization (Figure 4).

**Sustaining life in space isn’t feasible – the tech is centuries off**

Launius 10 (Roger D. Launius, PhD; Curator of Planetary Exploration Programs at National Air and Space Museum Smithsonian Institution, Sept 2010, www.sciencedirect.com/science/article/pii/S0160932710000451#cor0005, Endeavour, Vol 34, Iss 3, Pg 122-129)

In 1991, environmental scientists began an experiment to test the feasibility of supporting human beings in a closed environmental system. Funded at $150 million by Texas oil magnate Edward Bass, humans at Biosphere 2 in Arizona's Santa Catalina Mountains near Tuscon sought to test technologies that might be useful for sustaining life on the Moon or Mars. Recreating habitats from around the globe, designers of the three-acre facility provided for the complete recycling of water, food, and waste. Eight humans confined to the biosphere were to produce 80 percent of their own food. Like a spacecraft, the Biosphere leaked slightly, although not as much as NASA's space shuttle. Fifteen months after sealing in the eight subjects, the designers of Biosphere 2 were obliged to pump oxygen into the facility. Internal restoration processes proved insufficient to hold the oxygen content at its normal atmospheric level of 19 percent. When the level fell to 14.5 percent, for the safety of the occupants designers decided to break the seal.13 Biosphere 2's failure as a self-contained ‘terrarium’ supporting humans on Earth, much less one moving through the near-vacuum of space, was an eye-opener for those pursuing long-duration human spaceflight. After 1994 no further human habitation of the facility was attempted although it has been used for research in crops using the various environments recreated in it.14 The goal of keeping people alive in an enclosed, self-contained environment whisking through space may be **beyond human capabilities** **for** **many centuries**.15

### 2NC – Reproduction

**Space is an extra-large condom—microgravity destroys egg cells and even if humans are born they will be sterile—that’s The Week.**

**Also can’t reproduce because radiation wipes out sperm – this flips their scenario – it means extinction happens in space.**

**No reproduction in space—proton particles and radiation—we cite NASA**

**Bloxham, 11**. (Andy, news editor for *The Daily Telegraph*.2/14/11 “Sex in space tough, says Nasa”. *The Daily Telegraph.* Accessed online. <http://www.telegraph.co.uk/science/space/8322776/Sex-in-space-tough-says-Nasa.html>)

Sexual reproduction is likely to be impossible in space due to cosmic radiation bombarding the human body, according to Nasa scientists. Researchers at the agency's**Ames Research Centre**in California found that without effective shielding on spacecraft, powerful proton particles would probably sterilise any female embryo conceived in deep space They also concluded that male fertility was likely to be negatively affected, with the particles damaging the sperm count. Given that travel to distant planets is likely to take decades, centuries or longer, **this could make any mission to colonise other environments** **a non-starter.** The scientists noted that space shield technology is currently not sufficiently advanced to offer enough protection from this type of radiation. Dr Tore Straume, a radiation biophysicist at the centre, said: "The present shielding capabilities would probably preclude having a pregnancy transited to Mars." The DNA which manages the development of all the cells in the body is particularly susceptible to the kinds of radiation found in space. Studies on animals have shown that exposure to ionising radiation can kills egg cells in a female foetus as far on as the second or third trimester. Dr Straume added: "One would have to be very protective of those cells during gestation, during pregnancy, to make sure that the female didn't become sterile so they could continue the colony." Nasa has a strict code of conduct on sexual relations, stating that "relationships of trust" among astronauts are to be maintained at all times. The research was published in the Journal of Cosmology.

**No reproduction in space—radiation kills eggs and damages DNA.**

**Taylor** 11 (Jerome. Bio Reporter for The Independent Newspaper, 2/14/11 <http://www.independent.co.uk/news/science/why-infertility-will-stop-humans-colonising-space-2213861.html>, <http://www.independent.co.uk/news/science/>Why infertility will stop humans colonising space)

Renowned astrophysicist Stephen Hawking once remarked that humankind would need to colonise space within the next century if it was to survive as a species. "It will be difficult enough to avoid disaster in the next 100 years, let alone the next thousand or million," he said somewhat pessimistically last year. "Our only chance of long-term survival is not to remain inward-looking on planet Earth, but to spread out into space." The prospect of long-term space travel has led scientists to consider, increasingly seriously, the following conundrum: if travelling to a new home might take thousands of years, would humans be able to successfully procreate along the way? The early indications from Nasa are not encouraging. **Space**, it seems, **is simply not a good place to have sex.**According to a review by three scientists looking into the feasibility of colonising Mars, astronauts would be well advised to avoid getting pregnant along the way because of the high levels of radiation that would bombard their bodies as they travelled through space. Without effective shielding on spaceships, high-energy proton particles would probably sterilise any female foetus conceived in [deep space](http://www.independent.co.uk/news/science/why-infertility-will-stop-humans-colonising-space-2213861.html) and could have a profound effect on male fertility. "The present shielding capabilities would probably preclude having a pregnancy transited to Mars," said adiation [biophysicist](http://www.independent.co.uk/news/science/why-infertility-will-stop-humans-colonising-space-2213861.html) Tore Straume of Nasa's Ames Research Center in an essay for the Journal of Cosmology. The DNA which guides the development of all the cells in the body is easily damaged by the kind of radiation that would assail astronauts as they journeyed through space. Studies on non-human primates have shown that exposure to ionising radiation kills egg cells in a female foetus during the second half of pregnancy. "One would have to be very protective of those cells during [gestation](http://www.independent.co.uk/news/science/why-infertility-will-stop-humans-colonising-space-2213861.html), during pregnancy, to make sure that the female didn't become sterile so they could continue the colony," Dr Straume said. Radiation in space comes from numerous sources but the two types that have Nasa scientists most concerned are solar flares and galactic cosmic rays. Flares are the result of huge explosions in the Sun's atmosphere that catapult highly charged protons across space. The Earth's atmosphere and magnetic field absorbs much of this harmful radiation – but in space astronauts are much more vulnerable. Galactic cosmic rays pose an even greater threat. They are made up of even heavier charged particles. Although Nasa's shields can protect astronauts against most flare radiation, it is unlikely they could do the same against cosmic rays. Until recently, sex had been a taboo subject for Nasa, which has a strict code of conduct stating that "relationships of trust" among astronauts are to be maintained at all times. Only once has a husband and wife been on the same mission – Jan Davis and Mark Lee – and they have remained tight-lipped over whether they joined the 62-mile high club.

### 2NC – Water

**Water is trapped in minerals – and extracting water from those minerals is impossible – Terraforming is impossible – and you’d have to heat up the ground to over 200 degrees to get water**

#### Physical and chemical limitations prevent colonization efforts

Finkel 11 (Alan, neuroscientist and entrepreneur, and one of the founders of COSMOS. He is the Chief Technology Officer of Better Place Australia, and the Chancellor of Monash University, 4/11/11, “Forget space travel: it's just a dream”, <http://www.cosmosmagazine.com/features/online/4214/the-future-space-travel?page=0%2C1>)

HUMAN EXPANSION across the Solar System is an optimist’s fantasy. Why? Because of the clash of two titans: physics versus chemistry. In the red corner, the laws of physics argue that an enormous amount of energy is required to send a human payload out of Earth’s gravitational field to its deep space destination and back again. In the blue corner, the laws of chemistry argue that there is a hard limit to how much energy you can extract from the rocket fuel, and that no amount of ingenuity will change that. Start with a lightweight payload – a dozen astronauts collectively weighing less than a tonne. Now add the life support systems for a one-year journey, with sufficient food, water, oxygen and an energy source to keep their living quarters warm and bright. Fifty tonnes, perhaps? Add the rockets and rocket fuel for mid-course corrections, and for landing somewhere interesting then taking off to return to Earth, and the mass spirals to excess. The laws of physics are immutable. According to these laws, accelerating that large mass and fighting against planetary gravitational fields requires a tremendous amount of energy. Now consider the laws of chemistry. You can’t change them by legislation. The energy content that can be liberated from rocket fuel, and the propulsion force that can be generated, depend on the mass of the fuel, the molecular bond energies and the temperature at which the chemicals burn. Scientists and rocket engineers have known this for more than a century and have worked hard to optimise all the parameters. But at the end of the day, there is only so much that you can get out of the rocket fuel - and it's not enough. SOMEHOW, THE FACT that this clash of the titans restricts our ability to undertake deep space flights doesn’t feel right. Surely the magic of our success in electronics and information systems should apply? Moore’s law tells us that every two years the number of transistors in an integrated circuit doubles. Futurologists assure us that the total volume of humanity's knowledge doubles every five years. Why, then, shouldn’t our ability to lift a payload double every five, 10 or even 20 years? Sadly, the analogy does not apply. In the case of electronics and information systems, we are dealing with soft rules, related to the limits of human ingenuity. In the case of space flight, we are dealing with hard rules, related to the limits of physics and chemistry. Rocket engineers and scientists have been battling these limits of physics and chemistry for years, with diminishing prospects for further gains. Add to these hard limits the fear of failure from nervous governments worried about the political backlash if something goes wrong and, no surprise, the added weight for redundant safety and life-support systems makes return trips to other planets utterly impractical.

#### There’s no food

Brian 11 (Marshall, founder of HowStuffWorks, “What if we lived on the moon?”, http://science.howstuffworks.com/what-if-moon-colony.htm)

Food is also a problem. One person eats about 450 pounds of dehydrated food per year. A whole colony of people would require tons of food. The first thought that anyone on Earth would have is, "Grow the food on the moon." We think that way because here on Earth, chemicals like carbon and nitrogen are freely available in the atmosphere, and minerals are freely available in the Earth’s soil. A ton of wheat is made up of a ton of carbon, nitrogen, oxygen, hydrogen, potassium, phosphorous, and so on. To grow a ton of wheat, you'll have to import all the chemicals not readily available on the moon. Once the first crop is in, and as long as the colony's population is stable, then the chemicals can be reused in a natural cycle. The plant grows, a person eats it, and the person excretes it as solid waste, liquid waste and carbon dioxide in the breath. These waste products then nourish the next batch of plants. But you still have to get tons of food or chemicals to the moon to start the cycle.

# Rd 6 vs. UNT (SMR’s)

## 1NC

### 1

#### Immigration reform will pass, PC key

NYT 1/31

[New York Times, 1/31/12, http://www.nytimes.com/2013/02/01/us/politics/senators-look-at-07-failure-for-lessons-on-immigration.html?\_r=0]

As eight senators in a bipartisan group look ahead to a broad immigration overhaul, they are also looking back to 2006 and 2007 — the last time a major immigration measure was considered — as something of a reverse playbook. Lesson 1? “Make sure you get out there and define what you’re trying to do,” said former Senator Trent Lott, the Mississippi Republican who, in 2007, was the minority whip when his chamber’s immigration efforts imploded. “Don’t forget to pay attention to the message, and don’t let the media define what you’re trying to do.” It is a tip that Mr. Lott says he has communicated to the staff of Senator Marco Rubio, a Florida Republican involved in the current effort, and so far Mr. Rubio seems to be heeding the advice. In recent weeks, he has focused on conservative media powerhouses, tirelessly wooing influential voices on the right like Bill O’Reilly and Rush Limbaugh. “The outreach by Marco Rubio has been very positive,” Mr. Lott said. “He’s very good at explaining what he wants to do.” Getting out ahead by articulating their immigration principles, as the group did in a Monday news conference, is only one of the ways the senators hope to learn from the mistakes of the past. This time, they said, they are capitalizing on a promising political environment, using more conciliatory language, and trying to harness media outlets to their advantage. They also plan to move their legislation through the Judiciary Committee, a step not taken in 2007 and one that helped doom the bill, and are working more closely **with businesses and labor unions** to make sure the two can also reach a compromise. “Our timing is right,” said Richard J. Durbin of Illinois, the No. 2 Democrat in the Senate. “The election results are still fresh in the minds of my Republican colleagues and they don’t want to go through this again.” President George W. Bush said in 2009 that it was “a mistake” to have pushed for changes to Social Security, rather than immigration, immediately after the 2004 election. By the time he took on immigration late in his second term, he was a lame duck president, weakened by the war in Iraq and facing dissent within his party. “By his own admission, President Bush made a strategic error in not pushing the issue right after his re-election,” said Kevin Appleby, the director of migration policy at the United States Conference of Catholic Bishops. “President Obama is not making the same mistake. He still has a lot of political capital to spend.” In the wake of the 2012 presidential election, where Mr. Obama’s defeat of Mitt Romney came with the help of 71 percent of the Hispanic vote, **those on all sides** of the immigration effort believe the climate is ripe for another attempt. And, at least in the early stages, they are taking steps to reach across the aisle, even with the words they choose. “The most important lesson I took way from 2006 and 2007 is that people had no faith that there wouldn’t be future waves of illegal immigrants,” said Senator Charles E. Schumer, a Democrat of New York in the Senate’s bipartisan immigration group. To show that he is serious about an overhaul, he explained, he is especially conscious of the language he uses; Mr. Schumer now refers to “illegal immigrants,” a term preferred by the right and an acknowledgment that the 11 million illegal immigrants currently in the country did, in fact, break the law. In a similar linguistic concession, Mr. Rubio, during Monday’s immigration news conference, referred to the “undocumented” workers, a term generally preferred by Democrats and loathed by his party’s conservative wing. In 2007, in an attempt to save time and reach a deal, the Senate bypassed the Judiciary Committee and brought the legislation straight to the floor. At the time, the senators who drafted the bill tried to band together to vote down any amendments that changed the substance of their compromise, an agreement that broke down. Several controversial amendments, including one that then-Senator Obama supported, ultimately led to the bill’s collapse. “What we’re doing now is we’re going to put it through committee,” Mr. Schumer said. “When the bill gets through committee, it will be battle-tested and we will be prepared for the floor in a better way.” The group is also considering again trying to maintain **a large voting bloc**, to squash any amendments they believe could kill their bill. “I think we have to unless there’s something that we both agree to,” Senator John McCain, Republican of Arizona, said when asked about such a possibility at an immigration panel on Wednesday. “It’s going to be fragile, as these kinds of things are, and so we will have to take some tough votes in order to keep it intact.”

#### Plan Unpopular

Fairley 10 Peter, IEEE Spectrum, May, "Downsizing Nuclear Power Plants,” [spectrum.ieee.org/energy/nuclear/downsizing-nuclear-power-plants/0](http://spectrum.ieee.org/energy/nuclear/downsizing-nuclear-power-plants/0)

However, there are political objections to SMRs. Precisely because they are more affordable, they may well increase the risk of proliferation by bringing the cost and power output of nuclear reactors within the reach of poorer countries.¶ Russia’s first SMR, which the nuclear engineering group Rosatom expects to complete next year, is of particular concern. The Akademik Lomonosov is a floating nuclear power plant sporting two 35-MW reactors, which Rosatom expects to have tethered to an Arctic oil and gas operation by 2012. The reactor’s portability prompted Greenpeace Russia to call this floating plant **the world’s most dangerous nuclear project in a decade.¶ SMRs may be smaller than today’s reactors.** But, politically at least, they’re just as nuclear.

#### Immigration reform key to India’s economy

Los Angeles **Times**, 11/9/**2012** (Other countries eagerly await U.S. immigration reform, p. http://latimesblogs.latimes.com/world\_now/2012/11/us-immigration-reform-eagerly-awaited-by-source-countries.html)

"Comprehensive immigration reform will see expansion of skilled labor visas," predicted B. Lindsay Lowell, director of policy studies for the Institute for the Study of International Migration at Georgetown University. A former research chief for the congressionally appointed Commission on Immigration Reform, Lowell said he expects to see at least a fivefold increase in the number of highly skilled labor visas that would provide "a significant shot in the arm for India and China." There is widespread consensus among economists and academics that skilled migration fosters new trade and business relationships between countries and enhances links to the global economy, Lowell said. "Countries like India and China weigh the opportunities of business abroad from their expats with the possibility of brain drain, and I think they still see the immigration opportunity as a bigger plus than not," he said.

#### Slowing growth causes Nuke war with Pakistan

Bouton 10 (Marshall M., President – Chicago Council on Global Affairs, “America’s Interests in India”, CNAS Working Paper, October, <http://www.cnas.org/files/documents/publications/CNAS_USInterestsinIndia_> Bouton.pdf)

In South Asia, the most immediately compelling U.S. interest is preventing terrorist attacks on the U.S. homeland originating in or facilitated by actors in South Asia, particularly in Afghanistan and Pakistan. To avert that possibility, the United States also has an interest in the stability and development of both countries. At the same time, the United States has a vital interest in preventing conflict between Pakistan and India, immediately because such a conflict would do great damage to U.S. efforts in Afghanistan and Pakistan (such as the diversion of Pakistani military attention away from the insurgency) and because it would pose the severe risk of nuclear escalation. Finally, the United States has an interest in peace and stability in South Asia as a whole. Instability and violence in nearly every one of India’s neighbors, not to mention in India itself, could, if unchecked, undermine economic and political progress, potentially destabilizing the entire region. At present, a South Asia dominated by a politically stable and economically dynamic India is a hugely important counterweight to the prevalent instability and conflict all around India’s periphery. Imagining the counterfactual scenario, a South Asian region, including India, that is failing economically and stumbling politically, is to imagine instability on a scale that would have global consequences, including damage to the global economy, huge dislocations of people and humanitarian crisis, increasing extremism and terrorism, and much greater potential for unchecked interstate and civil conflict.

#### Extinction

Robock 10

[Alan professor of climatology at Rutgers University and associate director of the school’s Center for Environmental Prediction and Owen Brian Toon, chair of the department of atmospheric and oceanic sciences at the University of Colorado at Boulder and a fellow of the Laboratory for Atmospheric and Space Physics, fellow of the American Meteorological Society and the American Geophysical Union, “Local War, Global Suffering,” Scientific American, January, 2010, http://climate.envsci.rutgers.edu/pdf/RobockToonSciAmJan2010.pdf]

People have several incorrect impressions about nuclear winter. One is that the climatic effects were disproved; this is just not true [see sidebar on page 78]. Another is that the world would experience “nuclear autumn” instead of winter. But our new calculations show that the climate effects even of a regional conflict would be widespread and severe. The models and computers used in the 1980s were not able to simulate the lofting and persistence of the smoke or the long time it would take oceans to warm back up as the smoke eventually dissipated; current models of a full-scale nuclear exchange predict a nuclear winter, not a nuclear fall. Another misimpression is that the problem, even if it existed, has been solved by the end of the nuclear arms race. In fact, a nuclear winter could readily be produced by the American and Russian nuclear arsenals that are slated to remain in 2012. Furthermore, the increasing number of nuclear states raises the chances of a war starting deliberately or by accident. For example, North Korea has threatened war should the world stop its ships and inspect them for transporting nuclear materials. Fortunately, North Korea does not now have a usable nuclear arsenal, but it may have one capable of global reach in the near future. Some extremist leaders in India advocated attacking Pakistan with nuclear weapons following recent terrorist attacks on India. Because India could rapidly overrun Pakistan with conventional forces, it would be conceivable for Pakistan to attack India with nuclear weapons if it thought that India was about to go on the offensive. Iran has threatened to destroy Israel, already a nuclear power, which in turn has vowed never to allow Iran to become a nuclear state. Each of these examples represent countries that imagine their existence to be threatened completely and with little warning. These points of conflict have the potential to erupt suddenly.

### 2

#### Energy security militarizes energy – justifies intervention and causes serial policy failure

Ciuta 10 -- Lecturer in International Relations and Director of the Centre of European Politics, School of Slavonic and East European Studies @ University College London, UK (Felix, 2010, "Conceptual Notes on Energy Security: Total or Banal Security?" Security Dialogue 41(123), Sage)

Even casual observers will be familiar with the argument that energy is a security issue because it is either a cause or an instrument of war or conflict. Two different strands converge in this logic of energy security. The first strand focuses on energy as an instrument: energy is what states fight their current wars with. We can find here arguments regarding the use of the ‘energy weapon’ by supplier states (Belkin, 2007: 4; Lugar, 2006: 3; Winstone, Bolton & Gore, 2007: 1; Yergin, 2006a: 75); direct substitutions in which energy is viewed as the ‘equivalent of nuclear weapons’ (Morse & Richard, 2002: 2); and rhetorical associations that establish policy associations, as exemplified by the panel ‘Guns and Gas’ during the Transatlantic Conference of the Bucharest NATO Summit. The second strand comes from the literature on resource wars, defined as ‘hot conflicts triggered by a struggle to grab valuable resources’ (Victor, 2007: 1). Energy is seen as a primary cause of greatpower conflicts over scarce energy resources (Hamon & Dupuy, 2008; Klare, 2001, 2008). Alternatively, energy is seen as a secondary cause of conflict; here, research has focused on the dynamics through which resource scarcity in general and energy scarcity in particular generate socio-economic, political and environmental conditions such as population movements, internal strife, secessionism and desertification, which cause or accelerate both interstate and intrastate conflict (Homer-Dixon, 1991, 1994, 2008; Solana, 2008; see also Dalby, 2004). As is immediately apparent, this logic draws on a classic formulation that states that ‘a nation is secure to the extent to which it is not in danger of having to sacrifice core values, if it wishes to avoid war, and is able . . . to maintain them by victory in such a war’ (Lippmann, 1943: 51). The underlying principle of this security logic is survival: not only surviving war, but also a generalized quasi-Darwinian logic of survival that produces wars over energy that are fought with ‘energy weapons’. At work in this framing of the energy domain is therefore a definition of security as ‘the absence of threat to acquired values’ (Wolfers, 1952: 485), more recently reformulated as ‘survival in the face of existential threats’ (Buzan, Wæver & de Wilde, 1998: 27). The defining parameters of this traditional security logic are therefore: (1) an understanding of security focused on the use of force, war and conflict (Walt, 1991: 212; Freedman, 1998: 48); and (2) a focus on states as the subjects and objects of energy security. In the war logic, energy security is derivative of patterns of international politics – often captured under the label ‘geopolitics’ (Aalto & Westphal, 2007: 3) – that lend their supposedly perennial attributes to the domain of energy (Barnes, Jaffe & Morse, 2004; Jaffe & Manning, 1998). The struggle for energy is thus subsumed under the ‘normal’ competition for power, survival, land, valuable materials or markets (Leverett & Noël, 2007). A key effect of this logic is to ‘arrest’ issues usually not associated with war, and thus erase their distinctive characteristics. Even the significance of energy qua energy is abolished by the implacable grammar of conflict: energy becomes a resource like any other, which matters insofar as it affects the distribution of capabilities in the international system. As a result, a series of transpositions affect most of the issues ranked high on the energy security agenda. For example, in the European context, the problem is not necessarily energy (or, more precisely, gas, to avoid the typical reduction performed by such accounts). The problem lies in the ‘geopolitical interests’ of Russia and other supplier states, whose strength becomes inherently threatening (Burrows & Treverton, 2007; Horsley, 2006). Energy security policies become entirely euphemistic, as illustrated for example by statements that equate ‘avoiding energy isolation’ with ‘beating Russia’ (Baran, 2007). Such ‘geopolitical’ understanding of international politics also habituates a distinct vocabulary. Public documents, media reports and academic analyses of energy security are suffused with references to weapons, battles, attack, fear, ransom, blackmail, dominance, superpowers, victims and losers. It is therefore unsurprising that this logic is coterminous with the widely circulating narrative of the ‘new’ Cold War. This lexicon of conflict encourages modulations, reductions and transpositions in the meanings of both energy and security. This is evident at the most fundamental level, structuring encyclopaedic entries (Kohl, 2004) and key policy documents (White House, 2007), where energy security becomes oil security (security modulates energy into oil), which becomes oil geopolitics (oil modulates security into geopolitics). Once security is understood in the grammar of conflict, the complexity of energy is abolished and reduced to the possession of oilfields or gas pipelines. The effect of this modulation is to habituate the war logic of security, and also to create a hierarchy between the three constitutive dimensions of energy security (growth, sustenance and the environment). This hierarchy reflects and at the same time embeds the dominant effect of the war logic, which is the militarization of energy (Russell & Moran, 2008), an argument reminiscent of the debates surrounding the securitization of the environment (Deudney, 1990). It is of course debatable whether this is a new phenomenon. Talk of oil wars has been the subject of prestigious conferences and conspiracy theories alike, and makes the headlines of newspapers around the world. A significant literature has long focused on the relationship between US foreign policy, oil and war (Stokes, 2007; in contrast, see Nye, 1982). The pertinence of this argument cannot be evaluated in this short space, but it is worth noting that it too reduces energy to oil, and in/security to war. The key point is that this logic changes not only the vocabulary of energy security but also its political rationality. As Victor (2008: 9) puts it, this signals ‘the arrival of military planning to the problem of natural resources’ and inspires ‘a logic of hardening, securing and protecting’ in the entire domain of energy. There is, it must be underlined, some resistance to the pull of the logic of war, as attested for example by NATO’s insistence that its focus on energy security ‘will not trigger a classical military response’ (De Hoop Scheffer, 2008: 2). Yet, the same NATO official claims that ‘the global competition for energy and natural resources will re-define the relationship between security and economics’, which hints not only at the potential militarization of energy security policy but also at the hierarchies this will inevitably create. New geographies of insecurity will thus emerge if the relationship between the environment, sustenance and growth is structured by the militarized pursuit of energy (Campbell, 2005: 952; Christophe Paillard in Luft & Paillard, 2007).

#### Environmental apocalypticism causes eco-authoritarianism turns case

Buell 3Frederick—cultural critic on the environmental crisis and a Professor of English at Queens College and the author of five books, *From Apocalypse To Way of Life,* pages 185-186

Looked at critically, then, crisis discourse thus suffers from a number of liabilities. First, it seems to have become a political liability almost as much as an asset. It calls up a fierce and effective opposition with its predictions; worse, its more specific predictions are all too vulnerable to refutation by events. It also exposes environmentalists to being called grim doomsters and antilife Puritan extremists. Further, concern with crisis has all too often tempted people to try to find a “total solution” to the problems involved— a phrase that, as an astute analyst of the limitations of crisis discourse, John Barry, puts it, is all too reminiscent of the Third Reich’s infamous “final solution.”55 A total crisis of society—environmental crisis at its gravest—threatens to translate despair into inhumanist authoritarianism; more often, however, it helps keep merely dysfunctional authority in place. It thus leads, Barry suggests, to the belief that only elite- and expert-led solutions are possible.56 At the same timeit depoliticizes people, inducing them to accept their impotence as individuals; this is something that has made many people today feel, ironically and/or passively, that since it makes no difference at all what any individual does on his or her own, one might as well go along with it. Yet another pitfall for the full and sustained elaboration of environmental crisis is, though least discussed, perhaps the most deeply ironic. A problem with deep cultural and psychological as well as social effects, it is embodied in a startlingly simple proposition: the worse one feels environmental crisis is, the more one is tempted to turn one’s back on the environment. This means, preeminently, turning one’s back on “nature”—on traditions of nature feeling, traditions of knowledge about nature (ones that range from organic farming techniques to the different departments of ecological science), and traditions of nature-based activism. If nature is thoroughly wrecked these days, people need to delink from nature and live in postnature—a conclusion that, as the next chapter shows, many in U.S. society drew at the end of the millenium. Explorations of how deeply “nature” has been wounded and how intensely vulnerable to and dependent on human actions it is can thus lead, ironically, to further indifference to nature-based environmental issues, not greater concern with them. But what quickly becomes evident to any reflective consideration of the difficulties of crisis discourse is that all of these liabilities are in fact bound tightly up with one specific notion of environmental crisis—with 1960s- and 1970s-style environmental apocalypticism. Excessive concern about them does not recognize that crisis discourse as a whole has significantly changed since the 1970s. They remain inducements to look away from serious reflection on environmental crisis only if one does not explore how environmental crisis has turned of late from apocalypse to dwelling place. The apocalyptic mode had a number of prominent features: it was preoccupied with running out and running into walls; with scarcity and with the imminent rupture of limits; with actions that promised and temporally predicted imminent total meltdown; and with (often, though not always) the need for immediate “total solution.” **Thus doomsterism was its reigning mode;** eco-authoritarianism was a grave temptation; and as crisis was elaborated to show more and more severe deformations of nature, temptation increased to refute it, or give up, or even cut off ties to clearly terminal “nature.”

**Enframing of national security is a pre-requisite to macropolitical violence**

**Burke 7** (Anthony, Senior Lecturer in Politics and International Relations at UNSW, Sydney, “Ontologies of War: Violence, Existence and Reason”, Theory and Event, 10.2, Muse)

My argument here, whilst normatively sympathetic to Kant's moral demand for the eventual abolition of war, militates against excessive optimism.86 Even as I am arguing that war is not an enduring historical or anthropological feature, or a neutral and rational instrument of policy -- that it is rather the **product of hegemonic forms of knowledge** about political action and community -- my analysis does suggest some sobering conclusions about its power as an idea and formation. Neither the progressive flow of history nor the pacific tendencies of an international society of republican states will save us. The violent ontologies I have described here in fact dominate the conceptual and policy frameworks of modern republican states and have come, against everything Kant hoped for, to stand in for progress, modernity and reason. Indeed what Heidegger argues, I think with some credibility, is that the enframing world view has come to stand in for being itself. Enframing, argues Heidegger, 'does not simply endanger man in his relationship to himself and to everything that is...it drives out every other possibility of revealing...the rule of Enframing threatens man with the possibility that it could be denied to him to enter into a more original revealing and hence to experience the call of a more primal truth.'87 What I take from Heidegger's argument -- one that I have sought to extend by analysing the militaristic power of modern ontologies of political existence and security -- is a view that the challenge is posed not merely by a few varieties of weapon, government, technology or policy, but by an overarching system of thinking and understanding that lays claim to our entire space of truth and existence. Many of the **most destructive features of contemporary modernity** -- militarism, repression, coercive diplomacy, covert intervention, geopolitics, economic exploitation and ecological destruction -- derive not merely from particular choices by policymakers based on their particular interests, but from calculative, 'empirical' discourses of scientific and political truth rooted in powerful enlightenment images of being. Confined within such an epistemological and cultural universe, **policymakers' choices become necessities**, their actions become inevitabilities, and humans suffer and die. Viewed in this light, 'rationality' is the name we give the chain of reasoning which builds one structure of truth on another until a course of action, however violent or dangerous, becomes preordained through that reasoning's very operation and existence. It creates both discursive constraints -- available choices may simply not be seen as credible or legitimate -- and material constraints that derive from the mutually reinforcing cascade of discourses and events which then preordain militarism and violence as necessary policy responses, however ineffective, dysfunctional or chaotic. The force of my own and Heidegger's analysis does, admittedly, tend towards a deterministic fatalism. On my part this is quite deliberate; it is important to allow this possible conclusion to weigh on us. Large sections of modern societies -- especially parts of the media, political leaderships and national security institutions -- are utterly trapped within the Clausewitzian paradigm, within the instrumental utilitarianism of 'enframing' and the stark ontology of the friend and enemy. They are certainly tremendously aggressive and energetic in continually stating and reinstating its force. But is there a way out? Is there no possibility of agency and choice? Is this not the key normative problem I raised at the outset, of how the modern ontologies of war efface agency, causality and responsibility from decision making; the responsibility that comes with having choices and making decisions, with exercising power? (In this I am much closer to Connolly than Foucault, in Connolly's insistence that, even in the face of the anonymous power of discourse to produce and limit subjects, selves remain capable of agency and thus incur responsibilities.88) There seems no point in following Heidegger in seeking a more 'primal truth' of being -- that is to reinstate ontology and obscure its worldly manifestations and consequences from critique. However we can, while refusing Heidegger's unworldly89 nostalgia, appreciate that he was searching for a way out of the modern system of calculation; that he was searching for a 'questioning', 'free relationship' to technology that would not be immediately recaptured by the strategic, calculating vision of enframing. Yet his path out is somewhat chimerical -- his faith in 'art' and the older Greek attitudes of 'responsibility and indebtedness' offer us valuable clues to the kind of sensibility needed, but little more. When we consider the problem of policy, the force of this analysis suggests that choice and agency can be all too often limited; they can remain confined (sometimes quite wilfully) within the overarching strategic and security paradigms. Or, more hopefully, policy choices could aim to bring into being a more enduringly inclusive, cosmopolitan and peaceful logic of the political. But this cannot be done without seizing alternatives from outside the space of enframing and utilitarian strategic thought, by being aware of its presence and weight and activating a very different concept of existence, security and action.90 This would seem to hinge upon 'questioning' as such -- on the questions we put to the real and our efforts to create and act into it. Do security and strategic policies seek to exploit and direct humans as material, as energy, or do they seek to protect and enlarge human dignity and autonomy? Do they seek to impose by force an unjust status quo (as in Palestine), or to remove one injustice only to replace it with others (the U.S. in Iraq or Afghanistan), or do so at an unacceptable human, economic, and environmental price? Do we see our actions within an instrumental, amoral framework (of 'interests') and a linear chain of causes and effects (the idea of force), or do we see them as folding into a complex interplay of languages, norms, events and consequences which are less predictable and controllable?91 And most fundamentally: Are we seeking to coerce or persuade? Are less violent and more sustainable choices available? Will our actions perpetuate or help to end the global rule of insecurity and violence? Will our thought?

**Altenative – reject the affirmative’s security discourse – only resistance can generate genuine political thought**

**Neoclous 8 –** Mark Neocleous, Prof. of Government @ Brunel, 2008 [Critique of Security, 185-6]

The only way out of such a dilemma, to escape the fetish, is perhaps **to eschew the logic of security altogether** - to reject it as so ideologically loaded in favour of the state that any real political thought other than the authoritarian and reactionary should be pressed to give it up. That is clearly something that can not be achieved within the limits of bourgeois thought and thus could never even begin to be imagined by the security intellectual. It is also something that the constant iteration of the refrain 'this is an insecure world' and reiteration of one fear, anxiety and insecurity after another will also make it hard to do. But it is something that the critique of security suggests we may have to consider if we want a political way out of the impasse of security. This impasse exists because security has now become so all-encompassing that it **marginalises all else, most notably** the constructive conflicts, **debates** and discussions **that animate political life.** The constant prioritising of a mythical security as a political end - as the political end constitutes a rejection of politics in any meaningful sense of the term. That is, as a mode of action in which differences can be articulated, in which the conflicts and struggles that arise from such differences can be fought for and negotiated, in which people might come to believe that another world is possible - that they might transform the world and in turn be transformed. Security politics simply removes this; worse, it remoeves it while purportedly addressing it. In so doing it suppresses all issues of power and turns political questions into debates about the most efficient way to achieve 'security', despite the fact that we are never quite told - never could be told - what might count as having achieved it. Security politics is, in this sense, an anti-politics,"' dominating political discourse in much the same manner as the security state tries to dominate human beings, reinforcing security fetishism and the monopolistic character of security on the political imagination. We therefore need to get beyond security politics, not add yet more 'sectors' to it in a way that simply expands the scope of the state and legitimises state intervention in yet more and more areas of our lives. Simon Dalby reports a personal communication with Michael Williams, co-editor of the important text Critical Security Studies, in which the latter asks: if you take away security, what do you put in the hole that's left behind? But I'm inclined to agree with Dalby: **maybe there is no hole**."' The mistake has been to think that there is a hole and that this hole needs to be filled with a new vision or revision of security in which it is re-mapped or civilised or gendered or humanised or expanded or whatever. All of these ultimately remain within the statist political imaginary, and consequently end up reaffirming the state as the terrain of modern politics, the grounds of security. The real task is not to fill the supposed hole with yet another vision of security, but to fight for an **alternative political language** which takes us beyond the narrow horizon of bourgeois security and which therefore does not constantly throw us into the arms of the state. That's the point of critical politics: to develop a new political language more adequate to the kind of society we want. Thus while much of what I have said here has been of a negative order, part of the tradition of critical theory is that the negative may be as significant as the positive in setting thought on new paths. For if security really is the supreme concept of bourgeois society and the fundamental thematic of liberalism, then to keep harping on about insecurity and to keep demanding 'more security' (while meekly hoping that this increased security doesn't damage our liberty) is to **blind ourselves** to the possibility of building real alternatives to the authoritarian tendencies in contemporary politics. To situate ourselves against security politics would allow us to circumvent the debilitating effect achieved through the constant securitising of social and political issues, debilitating in the sense that 'security' helps consolidate the power of the existing forms of social domination and justifies the short-circuiting of even the most democratic forms. It would also allow us to forge another kind of politics centred on a **different conception of the good.** We need a new way of thinking and talking about social being and politics that moves us beyond security. This would perhaps be emancipatory in the true sense of the word. What this might mean, precisely, must be open to debate. But it certainly requires recognising that security is an illusion that has forgotten it is an illusion; it requires recognising that security is not the same as solidarity; it requires accepting that insecurity is part of the human condition, and thus giving up the search for the certainty of security and instead learning to tolerate the uncertainties, ambiguities and 'insecurities' that come with being human; it requires accepting that 'securitizing' an issue does not mean dealing with it politically, but **bracketing it out** and handing it to the state; **it requires us to be brave enough to return the gift."'**

### 3

#### “financial incentives” are funding for investors to develop a project – that excludes government purchases

**Czinkota et al, 9 -** Associate Professor at the McDonough School of Business at Georgetown University (Michael, Fundamentals of International Business, p. 69 – google books)

Incentives offered by policymakers to facilitate foreign investments are mainly of three types: fiscal, financial, and nonfinancial. **Fiscal incentives** are specific tax measures designed to attract foreign investors. They typically consist of special depreciation allowances, tax credits or rebates, special deductions for capital expenditures, tax holidays, and the reduction of tax burdens. **Financial incentives** offer special funding for the investor by providing, for example, land or buildings, loans, and loan guarantees. **Nonfinancial incentives** include guaranteed government purchases; special protection from competition through tariffs, import quotas, and local content requirements, and investments in infrastructure facilities.

#### Prefer precise limits – our interpretation gives a clear list with an intent to define – you create a massive topic that results in generics and one-sided debate on an already big and aff-biased topic

### 4

#### The United States Federal Government should procure small modular nuclear reactors for electricity generated by utility-owned small modular nuclear reactors, funded through up-front appropriations.

#### Solves the case--- accelerates SMR commercialization

CSPO 10 – Consortium for Science, Policy and Outcomes, Arizona State University, June 2010, “FOUR POLICY PRINCIPLES FOR ENERGY INNOVATION & CLIMATE CHANGE: A SYNTHESIS,” http://www.catf.us/resources/publications/files/Synthesis.pdf

Government purchase of new technologies is a powerful way to accelerate innovation through increased demand (Principle 3a). We explore how this principle can be applied by considering how the DoD could purchase new nuclear reactor designs to meet electric power needs for DoD bases and operations. Small modular nuclear power reactors (SMRs), which generate less than 300 MW of power (as compared to more typical reactors built in the 1000 MW range) are often listed as a potentially transformative energy technology. While typical traditional large-scale nuclear power plants can cost five to eight billion dollars, smaller nuclear reactors could be developed at smaller scale, thus not presenting a “bet the company” financial risk. SMRs could potentially be mass manufactured as standardized modules and then delivered to sites, which could significantly reduce costs per unit of installed capacity as compared to today’s large scale conventional reactor designs. It is likely that some advanced reactors designs – including molten salt reactors and reactors utilizing thorium fuels – could be developed as SMRs. Each of these designs offers some combination of inherently safe operation, very little nuclear proliferation risk, relatively small nuclear waste management needs, very abundant domestic fuel resources, and high power densities – all of which are desirable attributes for significant expansion of nuclear energy. Currently, several corporations have been developing small nuclear reactors. Table 2 lists several of these companies and their reactor power capacities, as well as an indication of the other types of reactor innovations that are being incorporated into the designs. Some of these technologies depend on the well-established light water reactor, while others use higher energy neutrons, coolants capable of higher temperature operation, and other innovative approaches. Some of these companies, such as NuScale, intend to be able to connect as many as 24 different nuclear modules together to form one larger nuclear power plant. In addition to the different power ranges described in Table 2, these reactors vary greatly in size, some being only 3 to 6 feet on each side, while the NuScale reactor is 60 feet long and 14 feet in diameter. Further, many of these reactors produce significant amounts of hightemperature heat, which can be harnessed for process heating, gas turbine generators, and other operations. One major obstacle is to rapid commercialization and development are prolonged multi-year licensing times with the Nuclear Regulatory Commission. Currently, the NRC will not consider a reactor for licensing unless there is a power utility already prepared to purchase the device. Recent Senate legislation introduced by Senator Jeff Bingaman (D-NM) has pushed for DOE support in bringing down reactor costs and in helping to license and certify two reactor designs with the NRC. Some additional opportunities to facilitate the NRC licensing process for innovative small modular reactors would be to fund NRC to conduct participatory research to get ahead of potential license applications (this might require ~$100million/year) and potentially revise the current requirement that licensing fees cover nearly all NRC licensing review costs. One option for accelerating SMR development and commercialization, would be for DOD to establish SMR procurement specifications (to include cost) and agree to purchase a sufficient amount of SMR’s to underwrite private sector SMR development. Of note here may be that DARPA recently (3/30/10) issued a “Request for Information (RFI) on Deployable Reactor Technologies for Generating Power and Logistic Fuels” 2 that specifies may features that would be highly desirable in an advanced commercial SMR. While other specifications including coproduction of mobility fuel are different than those of a commercial SMR power reactor, it is likely that a core reactor design meeting the DARPA inquiry specifications would be adaptable to commercial applications. While nuclear reactors purchased and used by DOD are potentially exempt from many NRC licensing requirements 3 , any reactor design resulting from a DOD procurement contract would need to proceed through NRC licensing before it could be commercially offered. Successful use of procured SMR’s for DOD purposes could provide the knowledge and operational experience needed to aid NRC licensing and it might be possible for the SMR contractor to begin licensing at some point in the SMR development process4. Potential purchase of small modular nuclear reactors would be a powerful but proven way in which government procurement of new energy technologies could encourage innovation. Public procurement of other renewable energy technologies could be similarly important.

#### The Net benefit

#### Electricity prices are declining

**Burtraw 8/21/12** (one of the nation’s foremost experts on environmental regulation in the electricity sector “Falling Emissions and Falling Prices: Expectations for the Domestic Natural Gas Boom” http://common–resources.org/2012/falling–emissions–and–falling–prices–expectations–for–the–domestic–natural–gas–boom/)

Moreover, the boom in domestic natural gas production could have even more immediate affects for U.S. electricity consumers. The increased supply of gas is expected to lower natural gas prices and retail electricity prices over the next 20 years, according to a [new RFF Issue Brief](http://www.rff.org/Publications/Pages/PublicationDetails.aspx?PublicationID=22019). These price decreases are expected to be even larger if demand for electricity continues on a slow–growth trajectory brought on by the economic downturn and the increased use of energy efficiency.For example, RFF analysis found that delivered natural gas prices would have been almost 35% higher in 2020 if natural gas supply projections had matched the lower estimates released by the U.S. Energy Information Administration (EIA) in 2009. Instead, with an increased gas supply, consumers can expect to pay $4.9 per MMBtu for delivered natural gas in 2020 instead of $6.6 per MMBtu. These trends are even more exaggerated if demand for electricity were to increase to levels projected by the EIA just three years ago, in 2009.This decrease in natural gas prices is expected to translate into a decrease in retail electricity prices for most electricity customers in most years out to 2020. Compared to the world with the lower gas supply projections, average national electricity prices are expected to be almost 6% lower, falling from 9.25 cents to 8.75 cents per kilowatt–hour in 2020. Residential, commercial, and industrial customers are all expected to see a price decrease, with the largest price changes occurring in parts of the country that have competitive electricity markets. All of these prices decreases translate into real savings for most electricity customers. The savings are largest for commercial customers, who stand to save $33.9 Billion (real $2009) under the new gas supply projections in 2020. Residential customers also stand to save big, with estimates of $25.8 Billion (real $2009) in savings projected for 2020.

#### PPAs undermine innovation and market development.

**Wesoff**, 5/12**/2010** (Eric, Anatomy of a Power Purchase Agreement, Greentech Solar, p. http://www.greentechmedia.com/articles/read/anatomy-of-a-power-purchase-agreement/)

Two of the major challenges to adoption of renewable energy include the barrier of high upfront costs. Power purchase agreements go a long way toward solving this problem, but they have their own set of flaws and advantages. Today's panel explored the state of PPAs. Marc Roper, the VP of Sales at PPA firm Tioga Energy, was the panelist most deeply entrenched in the PPA industry. Tioga works on PPAs for distributed generation in the several hundred kilowatts to multiple megawatts range. Roper said, "It's hard to be an innovator as a PPA provider -- we have to minimize technology risk. We are going to be at the tail end of the adoption curve." He added that new solar technology like "tracking, exotic materials, new types of electronics [like microinverters] -- we are a little less likely to adopt those." Most of those technologies will have to get to market through other means than PPAs.

#### That subsidizes cost and causes SMR models that shifts the cost to electrical grid.

**Cooper**, November **2009** (Mark – Senior Fellow for Economic Analysis at the Institute for Energy and the Environment at Vermont Law School, All Risk, No Reward for the Taxpayers and Ratepayers: The Economics of Subsidizing the ‘Nuclear Renaissance’ with Loan Guarantees and Construction Work in Progress, p. http://www.vermontlaw.edu/Documents/11\_03\_09\_Cooper%20All%20Risk%20Full%20Report.pdf)

Subsidies for Nuclear Reactor Construction Harms Taxpayers and Ratepayers Attempting to circumvent the sound judgment of capital markets, advocates of loan guarantees and construction work in progress claim that they lower the financing costs of nuclear reactors and are good for consumers, but shifting risk does not eliminate it and taxpayers and ratepayer will pay the price. • Because the subsidy induces the utility to choose an option that is not the least-cost option available, ratepayers will bear a higher burden. • Subsidies induce the utility to undertake risky behaviors that they would not otherwise have engaged in. When those undertakings go bad, the costs of the failures will be born by taxpayers and ratepayers in the form of expenditures on facilities that do not produce a flow of goods and services. • If the pre-approval process for loan guarantees and/or construction work in progress reduces scrutiny over cost escalation and overruns, ratepayers will end up paying a higher price than anticipated. • Even with subsidies, these projects are so risky and large that they tend to have adverse impacts on the utility’s financial rating, which results in substantial increases in the cost of service. • For cash-strapped consumers, taking after-tax dollars out of their pockets is a severe burden. If taxpayers and ratepayers have a higher discount rate than the utility rate of return, they would be better off having the present use of their money. There is a high probability that some or all of these factors will impose high costs on taxpayers and ratepayers (as described in Exhibit ES-2).

#### K2 Econ

Perry 12 (Mark, Prof of Economics @ Univ. of Michigan, "America's Energy Jackpot: Industrial Natural Gas Prices Fall to the Lowest Level in Recent History," http://mjperry.blogspot.com/2012/07/americas–energy–jackpot–industrial.html)

Building petrochemical plants could suddenly become attractive in the United States. Manufacturers will "reshore" production to take advantage of low natural gas and electricity prices. Energy costs will be lower for a long time, giving a competitive advantage to companies that invest in America, and also helping American consumers who get hit hard when energy prices spike. After years of bad economic news, the natural gas windfall is very good news. Let's make the most of it." The falling natural gas prices also make the predictions in this December 2011 study by PriceWaterhouseCoopers, "Shale gas: A renaissance in US manufacturing?"all the more likely: U.S. manufacturing companies (chemicals, metals and industrial) could employ approximately one million more workers by 2025 because of abundant, low–priced natural gas. Lower feedstock and energy cost could help U.S. manufacturers reduce natural gas expenses by as much as $11.6 billion annually through 2025. MP: As I have emphasized lately, America's ongoing shale–based energy revolution is one of the real bright spots in an otherwise somewhat gloomy economy, and provides one of the best reasons to be bullish about America's future. The shale revolution is creating thousands of well–paying, shovel–ready jobs in Texas, North Dakota and Ohio, and thousands of indirect jobs in industries that support the shale boom (sand, drilling equipment, transportation, infrastructure, steel pipe, restaurants, etc.). In addition, the abundant shale gas is driving down energy prices for industrial, commercial, residential and electricity–generating users, which frees up billions of dollars that can be spent on other goods and services throughout the economy, providing an energy–based stimulus to the economy. Cheap natural gas is also translating into cheaper electricity rates, as low–cost natural gas displaces coal. Further, cheap and abundant natural gas is sparking a manufacturing renaissance in energy–intensive industries like chemicals, fertilizers, and steel. And unlike renewable energies like solar and wind, the natural gas boom is happening without any taxpayer–funded grants, subsidies, credits and loans. Finally, we get an environmental bonus of lower CO2 emissions as natural gas replaces coal for electricity generation. Sure seems like a win, win, win, win situation to me.

#### Nuke war

Auslin 9 (Michael, Resident Scholar – American Enterprise Institute, and Desmond Lachman – Resident Fellow – American Enterprise Institute, “The Global Economy Unravels”, Forbes, 3–6, http://www.aei.org/article/100187)

What do these trends mean in the short and medium term? The Great Depression showed how social and global chaos followed hard on economic collapse. The mere fact that parliaments across the globe, from America to Japan, are unable to make responsible, economically sound recovery plans suggests that they do not know what to do and are simply hoping for the least disruption. Equally worrisome is the adoption of more statist economic programs around the globe, and the concurrent decline of trust in free–market systems. The threat of instability is a pressing concern. China, until last year the world's fastest growing economy, just reported that 20 million migrant laborers lost their jobs. Even in the flush times of recent years, China faced upward of 70,000 labor uprisings a year. A sustained downturn poses grave and possibly immediate threats to Chinese internal stability. The regime in Beijing may be faced with a choice of repressing its own people or diverting their energies outward, leading to conflict with China's neighbors. Russia, an oil state completely dependent on energy sales, has had to put down riots in its Far East as well as in downtown Moscow. Vladimir Putin's rule has been predicated on squeezing civil liberties while providing economic largesse. If that devil's bargain falls apart, then wide–scale repression inside Russia, along with a continuing threatening posture toward Russia's neighbors, is likely. Even apparently stable societies face increasing risk and the threat of internal or possibly external conflict. As Japan's exports have plummeted by nearly 50%, one–third of the country's prefectures have passed emergency economic stabilization plans. Hundreds of thousands of temporary employees hired during the first part of this decade are being laid off. Spain's unemployment rate is expected to climb to nearly 20% by the end of 2010; Spanish unions are already protesting the lack of jobs, and the specter of violence, as occurred in the 1980s, is haunting the country. Meanwhile, in Greece, workers have already taken to the streets. Europe as a whole will face dangerously increasing tensions between native citizens and immigrants, largely from poorer Muslim nations, who have increased the labor pool in the past several decades. Spain has absorbed five million immigrants since 1999, while nearly 9% of Germany's residents have foreign citizenship, including almost 2 million Turks. The xenophobic labor strikes in the U.K. do not bode well for the rest of Europe. A prolonged global downturn, let alone a collapse, would dramatically raise tensions inside these countries. Couple that with possible protectionist legislation in the United States, unresolved ethnic and territorial disputes in all regions of the globe and a loss of confidence that world leaders actually know what they are doing. The result may be a series of small explosions that coalesce into a big bang.

### Solvency

#### New incentives for SMR’s fail

**Spencer and Loris, 11** – Research Fellow in Nuclear Energy in the Thomas A. Roe Institute for Economic Policy Studies, and Research Associate in the Roe Institute, at The Heritage Foundation (Jack and Nicolas, 2/2. “A Big Future for Small Nuclear Reactors?” http://www.heritage.org/research/reports/2011/02/a-big-future-for-small-nuclear-reactors)

While some designs are closer to market introduction than others, the fact is that America’s regulatory and policy environment is not sufficient to support a robust expansion of existing nuclear technologies, much less new ones. New reactor designs are difficult to license efficiently, and the lack of a sustainable nuclear waste management policy causes significant risk to private investment. Many politicians are attempting to mitigate these market challenges by offering subsidies, such as loan guarantees. While this approach still enjoys broad support in Congress and industry, the reality is that it has not worked. Despite a lavish suite of subsidies offered in the Energy Policy Act of 2005, including loan guarantees, insurance against government delays, and production tax credits, no new reactors have been permitted, much less constructed. These subsidies are in addition to existing technology development cost-sharing programs that have been in place for years and defer significant research and development costs from industry to the taxpayer. The problem with this approach is that it ignores the larger systemic problems that create the unstable marketplace to begin with. These systemic problems generally fall into three categories: 1. Licensing. The Nuclear Regulatory Commission (NRC) is ill prepared to build the regulatory framework for new reactor technologies, and no reactor can be offered commercially without an NRC license. In a September 2009 interview, former NRC chairman Dale E. Klein said that small nuclear reactors pose a dilemma for the NRC because the commission is uneasy with new and unproven technologies and feels more comfortable with large light water reactors, which have been in operation for years and has a long safety record. 11 The result is that enthusiasm for building non-light-water SMRs is generally squashed at the NRC as potential customers realize that there is little chance that the NRC will permit the project within a timeframe that would promote near-term investment. So, regardless of which attributes an SMR might bring to the market, the regulatory risk is such that real progress on commercialization is difficult to attain. This then leaves large light water reactors, and to a lesser extent, small ones, as the least risky option, which pushes potential customers toward that technology, which then undermines long-term progress, competition, and innovation. 2. Nuclear Waste Management. The lack of a sustainable nuclear waste management solution is perhaps the greatest obstacle to a broad expansion of U.S. nuclear power. The federal government has failed to meet its obligations under the 1982 Nuclear Waste Policy Act, as amended, to begin collecting nuclear waste for disposal in Yucca Mountain. The Obama Administration’s attempts to shutter the existing program to put waste in Yucca Mountain without having a backup plan has worsened the situation. This outcome was predictable because the current program is based on the flawed premise that the federal government is the appropriate entity to manage nuclear waste. Under the current system, waste producers are able to largely ignore waste management because the federal government is responsible. The key to a sustainable waste management policy is to directly connect financial responsibility for waste management to waste production. This will increase demand for more waste-efficient reactor technologies and drive innovation on waste-management technologies, such as reprocessing. Because SMRs consume fuel and produce waste differently than LWRs, they could contribute greatly to an economically efficient and sustainable nuclear waste management strategy. 3. Government Intervention. Too many policymakers believe that Washington is equipped to guide the nuclear industry to success. So, instead of creating a stable regulatory environment where the market value of different nuclear technologies can determine their success and evolution, they choose to create programs to help industry succeed. Two recent Senate bills from the 111th Congress, the Nuclear Energy Research Initiative Improvement Act (S. 2052) and the Nuclear Power 2021 Act (S. 2812), are cases in point. Government intervention distorts the normal market processes that, if allowed to work, would yield the most efficient, cost-effective, and appropriate nuclear technologies. Instead, the federal government picks winners and losers through programs where bureaucrats and well-connected lobbyists decide which technologies are permitted, and provides capital subsidies that allow investors to ignore the systemic problems that drive risk and costs artificially high. This approach is especially detrimental to SMRs because subsidies to LWRs distort the relative benefit of other reactor designs by artificially lowering the cost and risk of a more mature technology that already dominates the marketplace.

#### Natural gas competition blocks SMRs

**Biello 12** (David, Associate Editor at Scientific American, March 27, "Small Reactors Make a Bid to Revive Nuclear Power", <http://www.scientificamerican.com/article.cfm?id=small-reactors-bid-to-revive-nuclear-power>)

Regardless of how cheap such Small Modular Reactors may allow nuclear to be in future, it is unlikely to be as cheap as natural-gas-fired turbines in the present. In fact, low natural gas prices stalled the U.S. nuclear renaissance outside Georgia and South Carolina, long before the reactor meltdowns at Fukushima Daiichi in Japan. "Because of an unanticipated abundance of natural gas in the United States, nuclear energy, in general, is facing tough competition," noted an analysis of the prospects for small modular reactors from the University of Chicago published last November. The analysis also suggested that small reactors would be more expensive than large reactors on a per-megawatt basis until manufacturing in significant quantities has happened. "It [is] unlikely that SMRs will be commercialized without some form of government incentive." But the Department of Energy funding may only support two designs. Innovation spurred by competition seems unlikely. And that may ultimately erode the current U.S. nuclear industry advantage—from design to operation to regulation.

#### Long timeframe to deployment

**ITA, 11** – International Trade Administration (U.S. Department of Commerce, February. Manufacturing and Services Competitiveness Report. “The Commercial Outlook for U.S. Small Modular Nuclear Reactors.” http://trade.gov/mas/ian/build/groups/public/@tg\_ian/@nuclear/documents/webcontent/tg\_ian\_003185.pdf)

Although SMRs have significant potential and the market for their deployment is growing, their designs must still go through the technical and regulatory processes necessary to ensure that they can be safely and securely deployed. Lightwater technology–based SMRs may not be ready for deployment in the United States for at least a decade, and advanced designs might be even further off. Light-water SMRs and SMRs that have undergone significant testing are the most likely candidates for near-term deployment, because they are most similar to existing reactors that have certified designs and significant operating histories. NuScale is on track to submit its reactor design to the NRC by 2012, as is Babcock & Wilcox for its mPower design. In addition, GE-Hitachi, which already completed an NRC preapplication review for its PRISM reactor in 1994, plans to submit its PRISM design for certification in 2012.

#### SMRs fail – assumes their predicted design

**Vujic, Antic, and Vukmirovic 12** (Jasmina, University of California at Berkeley, Dragoljub, ENECENIT Center in Belgrade, Serbia, and Zorka, ENECONIT Center in Belgrade, Serbia, "Environmental impact and cost analysis of coal versus nuclear power: The U.S. case", Energy, Volume 45, Issue 1, September 2012, Pages 31-42)

SmallModularReactors (SMRs) came into the focus over the last several years, primarily due to large initial capital investment requirements for large nuclear power plants. In the recently published paper on SMRs [35], it was pointed out that SMRs could offer simpler, standardized, and safer modular design by being factory built, requiring smaller initial capital investment, and having shorter construction times. The SMRs could be small enough to be transportable, could be used in isolated locations without advanced infrastructure and without power grid, or could be clustered in a single site to provide a multi-module large capacity power plant. There are technical and institutional challenges to be addressed regarding broader deployment of SMRs: testing and validation of technological innovations in components, systems and engineering (especially testing and fabrication of fuel), fear of first-of-kind reactor designs, economy-of-scale, perceived risk factors for nuclear power plants, and regulatory and licensing issues. Other issues to be addressed are the cost of reactor decommissioning and spent nuclear fuel (SNF) management. [35]

#### PPAs don’t solve power shortage – utilities block

Annie Snider 12, EandE reporter, 1/27/12, “Clean energy doesn't always bring security for military,” http://www.eenews.net/public/Greenwire/2012/01/27/1

Just north of Las Vegas, a shimmering array of solar panels captures energy from the blazing sun to power some of the Air Force's most advanced work, including testing and flying drones. Nellis Air Force Base's 14.2-megawatt solar power plant has been lauded by the military as a showpiece of a sweeping effort to boost energy security and resilience at bases by integrating renewable energy. Bases get 99 percent of their electricity from the commercial grid, which officials increasingly acknowledge is vulnerable to everything from storms to terrorist attacks. Wind, solar and biomass plants on military facilities can provide vital power if the local grid goes down, they say. But the 140 acres of solar panels at Nellis are useless when commercial power is out, thanks to **a provision in the project's agreement** with the local utility that lets NV Energy turn off the array if the grid goes down. The Nellis solar deal reveals some of the major hurdles facing the military as it tries to tap vast renewable energy on its lands as a buffer against the threat posed by power disruptions. For NV Energy, the key issue is safety. The utility does not want the renewable power plant feeding juice to the grid if workers are repairing lines. Solar panels connected directly to houses or businesses are not a problem, but they can pose safety hazards when they are hooked to the grid. There is a technological fix: a switch that would let the base disconnect from the grid and keep the solar panels up, shouldering some of the backup power burden that currently falls to the base's diesel generators when commercial power goes out. But Nellis has not implemented that fix. Nor has the Navy at the Naval Air Weapons Station in China Lake, Calif., where a 270-megawatt geothermal plant makes it the only military installation that produces more power than it uses. Nor have many other U.S. military bases that are quickly amassing fields of solar panels and wind turbines. To be sure, the idea of using renewable energy to power critical missions wasn't on the Pentagon agenda when the Nellis and China Lake projects were built in 2007 and 1987, respectively. But today, as the Defense Department undertakes a massive effort to build renewable energy generation for "energy security," there is still no overarching requirement that such power sources be able to support vital national missions if the local power goes out. "It's not energy security if you've got renewable generation that you cannot access if the grid goes down," said Scott Sklar, a 40-year veteran of the renewable power field and a frequent consultant for the military. Cost is often cited as a barrier for DOD not having the proper grid-access deals or technologies. Utilities charge a "disconnect fee" for the right to drop off the grid and continue generation during a power outage. The fees vary, but military energy managers say they are sizeable enough to affect a project's overall financials. Money's a problem for the military. Although officials see a security value to on-base power production, renewable energy projects are legally required to yield more in savings over their lifetime than they cost to build. Projects often meet that requirement with thin margins. "If our leadership determines to us that there is a financial value to energy security, then that will be used in our evaluation of price," said Steve Dumont, an energy manager for the Air Force Command that oversees Nellis. "It's really a policy issue." And that is the rub: DOD rules and guidance are largely driven by mandates for expanding the use of renewable energy and improving energy efficiency rather than operational need. Pentagon policymakers have been awakened in recent years to the vulnerability of bases that rely on commercial power, but as they start to devise new standards for renewable power, they must navigate regulatory mazes that vary from state to state. States have authority over utilities, and many utilities must be dealt with individually. Meanwhile, in the absence of orders from headquarters, base energy managers are left to make their own decisions. That is complicated by turnover on those posts and a lack of training and experience. The result is expensive, labor-intensive projects -- some funded with federal taxpayers' cash, others by developers -- that meet federal green-energy mandates but provide little security benefit to the military.

### Warming

#### Nuclear doesn’t solve warming –

#### A) Not cost-competitive and can’t produce enough hydrogen

Ahearne et al, 12 – adjunct scholar for Resources for the Future and an adjunct professor of engineering at Duke University (John F, February. Federation of American Scientists. “The Future of Nuclear Power in the United States.” http://www.fas.org/pubs/\_docs/Nuclear\_Energy\_Report-lowres.pdf)

In response to mitigating climate change, many countries will ﬁnd that nuclear power is neither the least-cost nor the quickest approach to reducing carbon dioxide emissions.1 Until nuclear energy is able to produce hydrogen or process heat, or until transportation sectors are electriﬁed, nuclear energy’s potential contribution to reducing carbon dioxide emissions will be somewhat limited.

#### B) Takes too long and can’t reduce emissions

**Madsen and Dutzik, 9** – Policy Analyst at Frontier Group and senior policy analyst with Frontier Group (Travis and Tony, November. With Bernadette Del Chiaro and Rob Sargent of the Environment America Research & Policy Center. “Generating Failure: How Building Nuclear Power Plants Would Set America Back in the Race Against Global Warming.” http://www.environmentamerica.org/sites/environment/files/reports/Generating-Failure---Environment-America---Web\_0.pdf)

Building 100 new nuclear reactors would happen too slowly to reduce global warming pollution in the near-term, and would actually increase the scale of emission cuts required in the future. At best, the nuclear industry could have a new reactor up and running by 2016, assuming that construction could be completed in four years. This pace would be faster than 80 to 95 percent of all reactors completed during the last wave of reactor construction in the United States. 70 If construction follows historical patterns, it could take nine years after a license is issued before the first reactor is up and running – into the 2020s. Under this very plausible scenario, new nuclear power could make no contribution toward reducing U.S. emissions of global warming pollution by 2020 – despite the investment of hundreds of billions of dollars for the construction of nuclear power plants. And even if the industry completed 100 new reactors by 2030, which is highly unlikely, these reactors would reduce cumulative power plant emissions of carbon dioxide over the next two decades by only 12 percent below business as usual, when a reduction of more than 70 percent is called for. In other words, 100 new nuclear reactors would be too little, too late to successfully meet our goals for limiting the severity of global warming.

#### C) Transportation outweighs

**Gordon, 10** – nonresident senior associate in Carnegie’s Energy and Climate Program, where her research focuses on climate, energy, and transportation issues in the United States and China (Deborah, December. “The Role of Transportation in Driving Climate Disruption.” http://carnegieendowment.org/files/transport\_climate\_disruption.pdf)

Climate impacts differ by sector. On-road transportation has the greatest negative effect on climate, especially in the short term. This is primarily because of two factors unique to on-road transportation: (1) nearly exclusive use of petroleum fuels, the combustion of which results in high levels of the principal warming gases (carbon dioxide, ozone, and black carbon); and (2) minimal emissions of sulfates, aerosols, and organic carbon from on-road transportation sources to counterbalance warming with cooling effects. Scientists find that cutting on-road transportation climate and air-pollutant emissions would be unambiguously good for the climate (and public health) in the near term. Transportation’s role in climate change is especially problematic, given the dependence on oil that characterizes this sector today. There are too few immediate mobility and fuel options in the United States beyond oil-fueled cars and trucks. U.S. and international policy makers have yet to tackle transportationclimate challenges. In its fourth assessment report, the Intergovernmental Panel on Climate Change (IPCC) found that the global transportation sector was responsible for the most rapid growth in direct greenhouse gas emissions, a 120 percent increase between 1970 and 2004. To further complicate matters, the IPCC projects that, without policy intervention, the rapidly growing global transportation sector has little motivation to change the way it operates, because consumer choices are trumping best practices. Herein lies a fundamental mismatch between the climate problem and solutions: transportation is responsible for nearly one of every three tons of greenhouse gas emissions but represents less than one of every twelve tons of projected emission reductions. Clearly this sector is a major contributor to climate change; therefore, it should be the focus of new policies to mitigate warming. Government must lead this effort as the market alone cannot precipitate the transition away from cars and oil, which dominate this sector.

#### D) No global spillover – can’t solve developing countries

**Socolow and Glaser, 9** – Professor of Mechanical and Aerospace Engineering at Princeton University and Assistant Professor at the Woodrow Wilson School of Public and International Affairs and in the Department of Mechanical and Aerospace Engineering at Princeton University (Robert H. and Alexander, Fall. “Balancing risks: nuclear energy & climate change.” Dædalus Volume 138, Issue 4, pp. 31-44. MIT Press Journals.)

In this paper we consider a nuclear future where 1,500 GW of base load nuclear power is deployed in 2050. A nuclear fleet of this size would contribute about one wedge, if the power plant that would have been built instead of the nuclear plant has the average CO2 emissions per kilowatt hour of all operating plants, which might be half of the value for a coal plant. Base load power of 1,500 GW would contribute one fourth of total electric power in a business-as-usual world that produced 50,000 terawatt-hours (TWh) of electricity per year, two-and-a-half times the global power consumption. However, in a world focused on climate change mitigation, one would expect massive global investments in energy efficiency–more efficient motors, compressors, lighting, and circuit boards–that by 2050 could cut total electricity demand in half, relative to business as usual. In such a world, 1,500 GW of nuclear power would provide half of the power. We can get a feel for the geopolitical dimension of climate change mitigation from the widely cited scenarios by the International Energy Agency (iea) presented annually in its World Energy Outlook (weo), even though these now go only to 2030. The weo 2008 estimates energy, electricity, and CO2 emissions by region. Its 2030 world emits 40.5 billion tons of CO2, 45 percent from electric power plants. The countries of theOrganisation for Economic Co-operation and Development (oecd) emit less than one third of total global fossil fuel emissions and less than one third of global emissions from electric power production. By extrapolation, at midcentury the oecd could contribute only one quarter of the world’s greenhouse gas emissions. It is hard for Western analysts to grasp the importance of these numbers. The focus of climate change mitigation today is on leadership from the OECD countries, which are wealthier and more risk averse. But within a decade, the targets under discussion today can be within reach only if mitigation is in full gear in those parts of the developing world that share production and consumption patterns with the industrialized world. The map (see Figure 1) shows a hypothetical global distribution of nuclear power in the year 2050 based on a highnuclear scenario proposed in a widely cited mit report published in 2003. Three-fifths of the nuclear capacity in 2050 as stated in the mit report is located in the oecd, and more nuclear power is deployed in the United States in 2050 than in the whole world today. The worldview underlying these results is pessimistic about electricity growth rates for key developing countries, relative to many other sources. Notably, per capita electricity consumption in almost every developing country remains below 4,000 kWh per year in 2050, which is one-fifth of the assumed U.S. value for the same year. Such a ratio would startle many analysts today–certainly many in China. It is well within limits of credulity that nuclear power in 2050 could be nearly absent from the United States and the European Union and at the same time widely deployed in several of the countries rapidly industrializing today. Such a bifurcation could emerge, for example, if public opposition to nu clear power in the United States and Europe remains powerful enough to prevent nuclear expansion, while elsewhere, perhaps where modernization and geopolitical considerations trump other concerns, nuclear power proceeds vigorously. It may be that the United States and other countries of the oecd will have substantial leverage over the development of nuclear power for only a decade or so. Change will not happen overnight. Since 2006, almost 50 countries that today have no nuclear power plants have approached the International Atomic Energy Agency (iaea) for assistance, and many of them have announced plans to build one or more reactors by 2020. Most of these countries, however, are not currently in a good position to do so. Many face important technical and economic constraints, such as grid capacity, electricity demand, or gdp. Many have too few trained nuclear scientists and engineers, or lack an adequate regulatory framework and related legislation, or have not yet had a public debate about the rationale for the project. Overall, the iaea has estimated that “for a State with little developed technical base the implementation of the first [nuclear power plant] would, on average, take about 15 years.” 11 This lead time constrains rapid expansion of nuclear energy today. A wedge of nuclear power is, necessarily, nuclear power deployed widely– including in regions that are politically unstable today. If nuclear power is suf-ficiently unattractive in such a deployment scenario, nuclear power is not on the list of solutions to climate change.

#### E) China and domestic politics block

**Hale 11** (Thomas, PhD Candidate in the Department of Politics – Princeton University and a Visiting Fellow – LSE Global Governance, London School of Economics, “A Climate Coalition of the Willing,” Washington Quarterly, Winter, http://www.twq.com/11winter/docs/11winter\_Hale.pdf)

Intergovernmental efforts to limit the gases that cause climate change have all but failed. After the unsuccessful 2010 Copenhagen summit, and with little progress at the 2010 Cancun meeting, it is hard to see how major emitters will agree any time soon on mutual emissions reductions that are sufficiently ambitious to prevent a substantial (greater than two degree Celsius) increase in average global temperatures. It is not hard to see why. No deal excluding the United States and China, which together emit more than 40 percent of the world’s greenhouse gases (GHGs), is worth the paper it is written on. But domestic politics in both countries effectively block ‘‘G-2’’ leadership on climate. In the United States, the Obama administration has basically given up on national cap-and-trade legislation. Even the relatively modest Kerry-Lieberman-Graham energy bill remains dead in the Senate. The Chinese government, in turn, faces an even harsher constraint. Although the nation has adopted important energy efficiency goals, the Chinese Communist Party has staked its legitimacy and political survival on raising the living standard of average Chinese. Accepting international commitments that stand even a small chance of reducing the country’s GDP growth rate below a crucial threshold poses an unacceptable risk to the stability of the regime. Although the G-2 present the largest and most obvious barrier to a global treaty, they also provide a convenient excuse for other governments to avoid aggressive action. Therefore, the international community should not expect to negotiate a worthwhile successor to the Kyoto Protocol, at least not in the near future.

**Warming is slowing – ocean currents**

**Science Daily 8** (“Will Global Warming Take A Short Break? Improved Climate Predictions Suggest A Reduced Warming Trend During The Next 10 Years”, 5-5, http://www.sciencedaily.com/releases/2008/05/080502113749.htm)

To date climate change projections, as published in the last IPCC report, only considered changes in future atmospheric composition. This strategy is appropriate for long-term changes in climate such as predictions for the end of the century. However, in order to predict short-term developments over the next decade, models need additional information on natural climate variations, in particular associated with **ocean currents**. Lack of sufficient data has hampered such predictions in the past. Scientists at IFM-GEOMAR and from the MPI for Meteorology have developed a method to derive ocean currents from measurements of sea surface temperature (SST). The latter are available in good quality and global coverage at least for the past 50 years. With this additional information, natural decadal climate variations, which are superimposed on the long-term anthropogenic warming trend, can be predicted. The improved predictions suggest that global **warming will weaken** slightly during the **following 10 years.** “Just to make things clear: we are not stating that anthropogenic climate change won’t be as bad as previously thought”, explains Prof. Mojib Latif from IFM-GEOMAR. “What we are saying is that on top of the warming trend there is a long-periodic oscillation that will probably lead to a to a **lower temperature increase** than we would expect from the current trend during the next years”, adds Latif. “That is like driving from the coast to a mountainous area and crossing some hills and valleys before you reach the top”, explains Dr. Johann Jungclaus from the MPI for Meteorology. “In some years trends of both phenomena, the anthropogenic climate change and the natural decadal variation will add leading to a much stronger temperature rise.”

#### Status quo solves – emissions are declining

Levi 12 (Michael, David M. Rubenstein Senior Fellow for Energy and the Environment – CFR, “Why Have U.S. Carbon Dioxide Emissions Plummeted?,” Council on Foreign Relations, 9/25/2012, http://blogs.cfr.org/levi/2012/09/25/why-have-u-s-carbon-dioxide-emissions-plummeted/)

U.S. carbon dioxide emissions for January-May are down six percent from 2011 to 2012. Headlines have highlighted the fact that emissions from January-March hit a twenty year low. What explains the shift? That question has been the subject of intense debate. John Hanger argues that 77 percent of that decline can be attributed to the shift from coal to gas. The folks over at CO2Scorecard, looking at January-March data, put that number at a more modest 21 percent. These are drastically different figures. What number should we believe? Part of the discrepancy comes from looking at different time periods. January-March emissions were affected more by the warm winter than April-May ones were. That makes sense because January-March is part of the winter. April-May emissions were affected more by rock bottom natural gas prices than January-March ones were. That makes sense because it was April-May when rock bottom (i.e. sub-two-dollars wellhead) natural gas prices prevailed. Let’s focus on the full January-May span, since it’s now the longest period for which we have 2011 and 2012 data, and do the analysis for ourselves. First the basics: Carbon dioxide emissions fell from 2,303 metric tons (Mt) in 2011 to 2,158 Mt in 2012, a drop of 145 Mt. (To keep things simple, the January-May time period is implicit in all this.) The basic story is that emissions from coal consumption plummeted by 132 Mt. Falling oil emissions chipped in another 18 Mt. Natural gas emissions were nearly flat; they were actually down 5 Mt. This would seem to suggest that natural gas played little role in falling emissions. Instead, it appears to suggest, reduced demand for coal is what did the trick. This’s roughly the intuition behind the conclusion from CO2Scorecard that natural gas has played a modest role in the U.S. emissions decline. Hanger contests this by making three basic points. First, he notes, “about 85% (132 of 144 million tons) of the 2012 U.S. Carbon emission decline is a product of falling emissions from coal.” Second, he argues, the decline in emissions from coal are “almost entirely as a result of more gas displacing coal generation this year. Indeed, coal’s electricity generation market share fell from 42% for all of 2011 to 32% in April and 34% in May.” Third, he observes, “Electricity demand is down 2% in the first 5 months of 2012 compared to 2011 so that is a small reason for declining emissions and probably explains about 10% of the 132 million ton decline of coal emissions.” Hanger puts these together with a few other estimates to come to his conclusion that 77 percent of the emissions decline is due to gas.

#### Warming is irreversible

ANI 10 (“IPCC has underestimated climate-change impacts, say scientists”, 3-20, One India, http://news.oneindia.in/2010/03/20/ipcchas-underestimated-climate-change-impacts-sayscientis.html)

According to Charles H. Greene, Cornell professor of Earth and atmospheric science, "Even if all man-made greenhouse gas emissions were stopped tomorrow and carbon-dioxide levels stabilized at today's concentration, by the end of this century, the global average temperature would increase by about 4.3 degrees Fahrenheit, or about 2.4 degrees centigrade above pre-industrial levels, which is significantly above the level which scientists and policy makers agree is a threshold for dangerous climate change." "Of course, greenhouse gas emissions will not stop tomorrow, so the actual temperature increase will likely be significantly larger, resulting in potentially catastrophic impacts to society unless other steps are taken to reduce the Earth's temperature," he added. "Furthermore, while the oceans have slowed the amount of warming we would otherwise have seen for the level of greenhouse gases in the atmosphere, the ocean's thermal inertia will also slow the cooling we experience once we finally reduce our greenhouse gas emissions," he said. This means that the temperature rise we see this century will be largely irreversible for the next thousand years. "Reducing greenhouse gas emissions alone is unlikely to mitigate the risks of dangerous climate change," said Green.

#### Long timeframe and adaptation solves

Robert O. Mendelsohn 9, the Edwin Weyerhaeuser Davis Professor, Yale School of Forestry and Environmental Studies, Yale University, June 2009, “Climate Change and Economic Growth,” online: http://www.growthcommission.org/storage/cgdev/documents/gcwp060web.pdf

The heart of the debate about climate change comes from a number of warnings from scientists and others that give the impression that human-induced climate change is an immediate threat to society (IPCC 2007a,b; Stern 2006). Millions of people might be vulnerable to health effects (IPCC 2007b), crop production might fall in the low latitudes (IPCC 2007b), water supplies might dwindle (IPCC 2007b), precipitation might fall in arid regions (IPCC 2007b), extreme events will grow exponentially (Stern 2006), and between 20–30 percent of species will risk extinction (IPCC 2007b). Even worse, there may be catastrophic events such as the melting of Greenland or Antarctic ice sheets causing severe sea level rise, which would inundate hundreds of millions of people (Dasgupta et al. 2009). Proponents argue there is no time to waste. Unless greenhouse gases are cut dramatically today, economic growth and well‐being may be at risk (Stern 2006).

These statements are largely alarmist and misleading. Although climate change is a serious problem that deserves attention, society’s immediate behavior has an extremely low probability of leading to catastrophic consequences. The science and economics of climate change is quite clear that emissions over the next few decades will lead to only mild consequences. The severe impacts predicted by alarmists require a century (or two in the case of Stern 2006) of no mitigation. Many of the predicted impacts assume there will be no or little adaptation. The net economic impacts from climate change over the next 50 years will be small regardless. Most of the more severe impacts will take more than a century or even a millennium to unfold and many of these “potential” impacts will never occur because people will adapt. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long‐range climate risks. What is needed are long‐run balanced responses.

#### No disease impact

Posner 4 (Richard, Judge – US Court of Appeals, Catastrophe: Risk and Response, p. 22-24)

Yet the fact that Homo sapiens has managed to survive **every disease** to assail it in the 200,000 years or so of its existence is a source of genuine comfort, at least if the focus is on extinction events. There have been enormously destructive plagues, such as the Black Death, smallpox, and now AIDS, but **none has come close** to destroying the entire human race. There is a biological reason. Natural selection favors germs of **limited lethality**; they are fitter in an evolutionary sense because their genes are more likely to be spread if the germs do not kill their hosts too quickly. The AIDS virus is an example of a lethal virus, wholly natural, that by lying dormant yet infectious in its host for years maximizes its spread. Yet there is no danger that AIDS will destroy the entire human race. The likelihood of a natural pandemic that would cause the extinction of the human race is probably **even less today** than in the past (except in prehistoric times, when people lived in small, scattered bands, which would have limited the spread of disease), despite wider human contacts that make it more difficult to localize an infectious disease. The reason is improvements in medical science. But the comfort is a small one. Pandemics can still impose enormous losses and resist prevention and cure: the lesson of the AIDS pandemic. And there is always a lust time.

#### -- Burn out stops disease

Lederberg 99 (Joshua, Professor of Genetics – Stanford University School of Medicine, Epidemic The World of Infectious Disease, p. 13)

The toll of the fourteenth-century plague, the "Black Death," was closer to one third. If the bugs' potential to develop adaptations that could kill us off were the whole story, we would not be here. However, with very rare exceptions, our microbial adversaries have a **shared interest** in our survival. Almost any pathogen comes to a **dead end** when we die; it first has to communicate itself to another host in order to survive. So historically, the really severe host- pathogen interactions have resulted in a **wipeout** of **both** host and pathogen. We humans are still here because, so far, the pathogens that have attacked us have willy-nilly had an interest in our survival. This is a very delicate balance, and it is easily disturbed, often in the wake of large-scale ecological upsets.

#### -- No extinction from environmental collapse

Easterbrook 3 (Gregg, Senior Fellow – New Republic, “We’re All Gonna Die!”, Wired Magazine, July, http://www.wired.com/wired/archive/11.07/doomsday.html?pg=1&topic=&topic\_set=)

If we're talking about doomsday - the end of human civilization - many scenarios simply don't measure up. A single nuclear bomb ignited by terrorists, for example, would be awful beyond words, but life would go on. People and machines might converge in ways that you and I would find ghastly, but from the standpoint of the future, they would probably represent an adaptation. Environmental collapse might make parts of the globe unpleasant, but considering that the biosphere has survived ice ages, it **wouldn't be the final curtain**. Depression, which has become 10 times more prevalent in Western nations in the postwar era, might grow so widespread that vast numbers of people would refuse to get out of bed, a possibility that Petranek suggested in a doomsday talk at the Technology Entertainment Design conference in 2002. But Marcel Proust, as miserable as he was, wrote Remembrance of Things Past while lying in bed.

#### -- Long time-frame

Kay 1 (Jane, “Study Takes Historical Peek at Plight of Ocean Ecosystems”, San Francisco Chronicle, 7-26, Lexis)

The collapse of ecosystems often occur over a **long period**. In one example, when Aleut hunters killed the Alaskan sea otter about **2,500 years ago**, the population of their natural prey, the sea urchin, grew larger than its normal size. In turn, the urchins grazed down the kelp forests, important habitat for a whole host of ocean life. Then, when fur traders in the 1800s hunted the otters and sea cows almost to extinction, the kelp forests disappeared and didn't start to regenerate until the federal government protected the sea otters in the 20th century. In California, the diversity of spiny lobsters, sheephead fish and abalone kept down the urchin numbers. At present in Alaska, the kelp beds are declining again in areas where killer whales are preying on sea otters. Biologists think the killer whales switched to otters for food because there are fewer seals and sea lions to eat.

#### Marginal losses don’t erode ecosystem resilience

Sagoff ‘8 (Mark, Senior Research Scholar @ Institute for Philosophy and Public Policy @ School of Public Policy @ U. Maryland, Environmental Values, “On the Economic Value of Ecosystem Services”, 17:2, 239-257, EBSCO)

What about the economic value of biodiversity? Biodiversity represents natureʼs greatest largess or excess since species appear nearly as numerous as the stars except that ʻscientists have a better understanding of how many stars there are in the galaxy than how many species there are on Earthʼ.41 The ʻnextʼ or ʻincrementalʼ thousand species taken at random would not fetch a market price because another thousand are immediately available, and another thousand after that. No one has suggested an economic application, moreover, for any of the thousand species in the USA listed as threatened.42 To defend the ʻmarginalʼ value of biodiversity on economic grounds is to trade convincing spiritual, aesthetic and ethical arguments for bogus, pretextual and disingenuous economic ones.43 As David Ehrenfeld has written, We do not know how many [plant] species are needed to keep the planet green and healthy, but it seems very unlikely to be anywhere near the more than quarter of a million we have now. Even a mighty dominant like the American chestnut, extending over half a continent, all but disappeared without bringing the eastern deciduous forest down with it. And if we turn to the invertebrates, the source of nearly all biological diversity, what biologist is willing to find a value – conventional or ecological – for all 600,000-plus species of beetles?44 The disappearance in the wild even of agriculturally useful species appears to have no effect on production. The last wild aurochs, the progenitor of dairy and beef cattle, went extinct in Poland in 1742, yet no one believes the beef industry is threatened. The genetic material of crop species is contained in tens of thousands of landraces and cultivars in use – rice is an example – and does not depend on the persistence of wild ancestral types. Genetic engineering can introduce DNA from virtually any species into virtually any other – which allows for the unlimited creation of biodiversity. A neighbour of mine has collected about 4,000 different species of insects on his two-acre property in Silver Spring, Maryland. These include 500 kinds of Lepidoptera (mostly moths) – half the number another entomologist found at his residence.45 When you factor in plants and animals the amount of ʻbackyard biodiversityʼ in suburbs is astounding and far greater than you can imagine.46 Biodiversity generates no price ʻat the marginʼ because nature provides far more of it than anyone could possibly administer. If one kind of moth flies off, you can easily attract hundreds of others. The price of a building lot in suburban Maryland, where I live, is a function of its proximity to good schools and to Washington, DC. The thousands of kinds of insects, weeds, microbes, etc. that nature lavishes on the typical suburban lot do not increase its price. No one wants to invest to see if any of these creatures contains a cancer-curing drug, although a raccoon in my attic did test positive for rabies.47 No one thinks that property values are a function of biodiversity; no one could suppose that a scarcity of critters looms that might create a competitive advantage for housing lots that are more generously endowed with deer, opossums, muskrats, raccoons, birds or beavers. (A neighbour who has a swimming pool plays unwilling summer host to a beaver who at night jumps off the diving board into the pool, swims around, and jumps again.) An astronomical variety of biodiversity is thrown in with every acre zoned for residential use. Buy an acre or two, and an immense amount of biodiversity is yours for nothing.

#### Ocean species are highly resilient

Dulvy et al in ‘3

(Nicholas, (School of Marine Science and Tech. @ U. Newcastle), Yvonne Sadovy, (Dept. Ecology and Biodiversity @ U. Hong Kong), and John D. Reynolds, (Centre for Ecology, Evolution and Conservation @ School of Bio. Sci. @ U. East Anglia), Fish and Fisheries, “Extinction vulnerability in marine populations”, 4:1, Blackwell-Synergy)

Marine fish populations are more variable and resilient than terrestrial populations Great natural variability in population size is sometimes invoked to argue that IUCN Red List criteria, as one example, are too conservative for marine fishes (Hudson and Mace 1996; Matsuda et al. 1997; Musick 1999; Powles et al. 2000; Hutchings 2001a). For the (1996) IUCN list, a decline of 20% within 10 years or three generations (whichever is longer) triggered a classification of 'vulnerable', while declines of 50 and 80% led to classifications of 'endangered' and 'critically endangered', respectively. These criteria were designed to be applied to all animal and plant taxa, but many marine resource biologists feel that for marine fishes 'one size does not fit all' (see Hutchings 2001a). They argue that percent decline criteria are too conservative compared to the high natural variability of fish populations. Powles et al. (2000) cite the six-fold variation of the Pacific sardine population (Sardinops sagax, Clupeidae) and a nine-fold variation in northern anchovy (Engraulis mordax, Clupeidae) over the past two millennia to suggest that rapid declines and increases of up to 10-fold are relatively common in exploited fish stocks. It should, however, be borne in mind that the variation of exploited populations must be higher than unexploited populations because recruitment fluctuations increasingly drive population fluctuations when there are few adults (Pauly et al. 2002).

#### No climate impact

Taylor, 11 James Taylor, managing editor of Environment & Climate News, a national monthly publication devoted to sound science and free-market environmentalism with a circulation of approximately 75,000 readers. He is also senior fellow for The Heartland Institute focusing on environmental issues. “ Climate Change Weekly: Global Warming Benefiting Africa’s Sahel Region” [http://news.heartland.org/newspaper-article/2011/12/15/climate-change-weekly-global-warming-benefiting-africas-sahel-region Accessed 6/18/12](http://news.heartland.org/newspaper-article/2011/12/15/climate-change-weekly-global-warming-benefiting-africas-sahel-region%20Accessed%206/18/12) BJM

Global warming activists are sounding four-alarm fire bells over a new study claiming global warming is causing drought and killing trees in the Sahel region of sub-Saharan Africa. Much like previous claims that have fallen by the wayside, the notion that global warming is devastating the Sahel is unlikely to stand the dual tests of time and scientific scrutiny. According to the new study, a rise in temperatures and a decline in precipitation during the 20th century reduced tree densities in the Sahel by approximately 18 percent from 1954 through 2002. Lead author Patrick Gonzalez says in a press release accompanying the study, “Rainfall in the Sahel has dropped 20-30 percent in the 20th century…” At first glance, the study and accompanying press release might present a persuasive argument for Western democracies to reduce carbon dioxide emissions. Then again, the argument that Western democracies should reduce carbon dioxide emissions may have been driving the study, rather than the other way around. Lead author Gonzalez is also a lead author for the United Nations Intergovernmental Panel on Climate Change (IPCC), whose funding and very existence are dependent on the assertion that humans are causing a global warming crisis. Moreover, IPCC is on record claiming global warming is causing an increase in drought, so having a new study claiming global warming is causing drought and related problems in Africa’s Sahel region bolsters the shared interests of Gonzalez and IPCC. Gonzalez also spent half of the past decade as a staffer for the Nature Conservancy environmental activist group. The Nature Conservancy is one of the most vocal proponents of global warming alarmism and has also long asserted Western democracies must dramatically reduce carbon dioxide emissions. Further, NASA and the U.S. Geological Survey funded the study. If such funded studies find little about which to be concerned, NASA and U.S. Geological Survey funds dry up, as do funds for Gonzalez and his National Park Service employers. This is not to say that readers should dismiss out of hand a study published by a Nature Conservancy staffer and United Nations representative with clear incentives to conclude global warming is causing drought and tree deaths. Such a background and incentives should, however, cause readers to look a little more deeply at the facts before accepting the study’s conclusions at face value. Turning to the science, assertions that global warming is causing drought and tree deaths in the Sahel is surprising news to many scientists and Sahel observers. The Sahel is a relatively narrow band of land stretching east-west across the African continent at the southern edge of the Sahara Desert. Contrary to what Gonzalez reports in his new study, many studies have documented improving conditions in the Sahel as the earth has warmed. “The southern Saharan desert is in retreat, making farming viable again in what were some of the most arid parts of Africa,” New Scientist reported in 2002 (http://www.newscientist.com/article/dn2811-africas-deserts-are-in-spectacular-retreat.html). “Burkina Faso, one of the West African countries devastated by drought and advancing deserts 20 years ago, is growing so much greener that families who fled to wetter coastal regions are starting to go home.” An “analysis of satellite images completed this summer reveals that dunes are retreating right across the Sahel region on the southern edge of the Sahara desert,” New Scientist explained. “Vegetation is ousting sand across a swathe of land stretching from Mauritania on the shores of the Atlantic to Eritrea 6000 kilometres away on the Red Sea coast. Nor is it just a short-term trend. Analysts say the gradual greening has been happening since the mid-1980s.” “There are more trees for firewood and more grassland for livestock. And a survey among farmers shows a 70 per cent increase in yields of local cereals such as sorghum and millet in one province in recent years,” New Scientist added. These trends have continued throughout the past decade. In 2009 scientists at Boston University used satellite data to study African vegetation patterns since the mid-1990s. As reported by BBC News, “satellite images from the last 15 years do seem to show a recovery of vegetation in the Southern Sahara.” “The broader picture is reinforced by studies carried out in the Namib Desert in Namibia,” BBC News added. “This is a region with an average rainfall of just 12 millimetres per year – what scientists call ‘hyper-arid’. Scientists have been measuring rainfall here for the last 60 years. Last year the local research centre, called Gobabeb, measured 80mm of rain.” Scientists at Brown University and the University of Minnesota-Duluth confirmed a longer term improvement in African soil moisture. After studying African drought patterns since the 1400s, the scientists reported in January 2007 in the peer-reviewed science journal Geology that Africa is “experiencing an unusually prolonged period of stable, wet conditions in comparison to previous centuries of the past millennium.” Moreover, “the patterns and variability of twentieth-century rainfall in central Africa have been unusually conducive to human welfare in the context of the past 1400 yr,” the scientists explained. The same patterns are occurring globally. Analyzing satellite imagery that has been available since 1982, scientists reported in a 2003 peer-reviewed study in Science, “We present a global investigation of vegetation responses to climatic changes by analyzing 18 years (1982 to 1999) of both climatic data and satellite observations of vegetation activity. Our results indicate that global changes in climate have eased several critical climatic constraints to plant growth, such that net primary production increased 6% (3.4 petagrams of carbon over 18 years) globally.” With so many studies and data indicating global warming is benefiting soil moisture, plant growth and forest expansion in the Sahel region, Africa as a whole and globally, the new assertion that global warming is causing a climate crisis in the Sahel is speculative and controversial at best. Perhaps Gonzalez inadvertently revealed the true purpose of his new study when he concluded his press release by saying, “We in the U.S. and other industrialized nations have it in our power, with current technologies and practices, to avert more drastic impacts around the world by reducing our greenhouse gas emissions.” This is certainly something we would expect a Nature Conservancy staffer and United Nations representative to say.

#### No impact—negligible pH change and animal response

NIPCC 10 (Nongovernmental International Panel on Climate Change, multi-national scientific coalition comprised of leading climate scientists, “Speculations beyond the Scope of Reality,” http://www.nipccreport.org/articles/2010/may/05may2010a1.html, AM)

In the introductory material to their paper on potential effects of predicted near-future increases in CO2-driven ocean acidification on shell-producing calcification in a certain species of oyster, Watson et al. (2009) report that over the past two centuries, CO2 emissions from deforestation and the burning of fossil fuels have increased atmospheric CO2 concentrations from 280 to 380 ppm, citing NOAA/ESRL records produced and maintained by Pieter Tans. They additionally say that the portion of this extra CO2 that has been taken up by the planet's oceans has caused a 0.1 unit drop in the pH of their surface waters, which would appear to be correct. However, they predict there will be a further reduction in ocean pH of 0.3 to 0.5 units by 2100, citing the work of Haugan and Drange (1996), Orr et al. (2005) and Caldeira and Wickett (2005), while noting that these predicted changes in ocean pH "are not only greater but far more rapid than any experienced in the last 24 million years," citing Blackford and Gilbert (2007), or "possibly the last 300 million years," citing Caldeira and Wickett (2003). But how likely are such predictions? Consider the findings of Tans himself, who Watson et al. approvingly cite in regard to the CO2 history they mention. In a paper published inOceanography, Tans (2009) concluded that the future trajectory of oceanic pH will likely be significantly different from that suggested by the scientists cited by Watson et al., while at the same time bravely criticizing the IPCC reports that have also accepted the highly inflated acidification predictions of those scientists. Indeed, whereas Watson et al. and the IPCC accept the claims of those who project a decline in pH somewhere in the range of 0.3 to 0.5 between now and the end of the century, Tans' projections yield a pH decline somewhere in the range of 0.09 to 0.17, which is much smaller, and which would be expected to have significantly reduced biological impacts compared to those suggested by the experimental work of Watson et al. for that future point in time. Based on the results of their experiments and the maximum decline in ocean-water pH that they accept, for example, Watson et al. predict a significantdecline of 72% in Sydney rock oyster (Saccostrea glomerata) larval survival by the year 2100. However, utilizing Watson et al.'s data, but with the maximum ocean-water pH decline calculated by Tans, one obtains a non-significant larval survival decline of only 14%, based on interpolation of the graphical results portrayed in Watson et al.'s paper. In like manner, similar assessments of changes in antero-posterior measurement yield asignificant decline of 8.7% using Watson et al.'s assumptions about ocean pH, but a non-significant decline of only 1.8% according to Tans' pH calculations. Corresponding results for dorso-ventral measurement were a significant decline of 7.5% with Watson et al.'s pH values, but a non-significant decline of only 1.5% with Tans' values; while for larval dry mass there was a decline of 50% in Watson et al.'s analysis, but an actualincrease (albeit non-significant) of 6% using Tans' pH analysis. Last of all, for empty shells remaining there was a significant decline of 90% in the Watson et al. study, but a non-significant decline of only 6% when Tans' pH projections were used. In summation, based on their experimental data and the ocean pH projections for the end of the century that are promoted by them and the IPCC, Watson et al. find what they characterize as "a dramatic negative effect on the survival, growth, and shell formation of the early larval stages of the Sydney rock oyster." On the other hand, employing the pH values projected by Tans, there are no statistically significant reductions in any of the five biological parameters measured and evaluated by Watson et al., which is an amazingly benign response to an environmental threat that is being suggested by some to be more serious or extreme than it was at any other time that it may have reared its ugly head over the past 300 million years!

### War

#### Most recent evidence proves nuclear winter causes extinction

**Starr 12**

[Steven Starr - Director of the Clinical Laboratory Science Program at the University of Missouri-Columbia, Associate member of the Nuclear Age Peace Foundation, has been published by the Bulletin of the Atomic Scientists, his writings appear on the websites of the Nuclear Age Peace Foundation, the Moscow Institute of Physics and Technology Center for Arms Control, Energy and Environmental Studies, Scientists for Global Responsibility, and the International Network of Scientists Against Proliferation, “What is nuclear darkness?,” <http://www.nucleardarkness.org/web/whatisnucleardarkness/>]

In a nuclear war, burning cities would create millions of tons of thick, black smoke. This smoke would rise above cloud level, into the stratosphere, where it would quickly spread around the planet. A large nuclear war would produce enough smoke to block most sunlight from reaching the Earth's surface. Massive absorption of warming sunlight by a global stratospheric smoke layer would rapidly create Ice Age temperatures on Earth . The cold would last a long time; NASA computer models predict 40% of the smoke would still remain in the stratosphere ten years after a nuclear war. Half of 1% of the explosive power of US-Russian nuclear weapons can create enough nuclear darkness to impact global climate. 100 Hiroshima-size weapons exploded in the cities of India and Pakistan would put up to 5 million tons of smoke in the stratosphere . The smoke would destroy much of the Earth's protective ozone layer and drop temperatures in the Northern Hemisphere to levels last seen in the Little Ice Age. Shortened growing seasons could cause up to 1 billion people to starve to death. A large nuclear war could put 150 million tons of smoke in the stratosphere and make global temperatures colder than they were 18,000 years ago during the coldest part of the last Ice Age. Killing frosts would occur every day for 1-3 years in the large agricultural regions of the Northern Hemisphere. Average global precipitation would be reduced by 45%. Earth's ozone layer would be decimated. Growing seasons would be eliminated. A large nuclear war would utterly devastate the environment and cause most people to starve to death . Deadly climate change, radioactive fallout and toxic pollution would cause already stressed ecosystems to collapse. The result would be a mass extinction event that would wipe out many animals living at the top of the food chains - including human beings.

#### Great power war is likely now –

#### A. Self-interest

Coker 11 [Christopher Coker is Professor of International Relations at the London School of Economics and Political Science, “Review: Why Nations Fight, Richard Ned Lebow”, Ethics & International Affairs, 25, no. 3 (2011), pp. 385–391, Chetan]

Why Nations Fight has Richard Ned Lebow’s familiar stamp: it is meticulously researched, trenchantly argued, grounded in extraordinarily wide reading, and informed by a healthy dose of common sense. He has no truck with authors, such as John Mueller, who argue that war is now in terminal decline, especially among the great powers. According to Lebow, **four** generic **motives have** historically **led to war: fear, interest, status, and revenge**—**and all of them are still likely to lead to future conﬂict**. None of these motives can be effectively addressed by war, but what we perceive to be objectively true does not always accord with objective reality. As for Mueller’s claim that war will go the way of dueling and slavery in the nineteenth century, I would go as far as to say that neither slavery nor dueling has disappeared. According to the United Nations there are 29 million slaves in the world today (in absolute terms, the highest number in history). Nor have we given up dueling: we simply have moved the practice to the courts, where we sue our enemies for defamation. As for war, it is positively protean in its ability to be re-branded. **Yesterday’s foot soldiers have been joined by “cyber-warriors”** and “cubicle warriors” (the drone pilots who remotely deal in death and destruction over the skies of Pakistan and now Yemen). Precisely because we have removed much of the risk to our own personnel, **we have given war a renewed lease on life**, even if at the same time we have rendered it post-heroic. “I hope that many more computer chips will lay down their lives for their country,” remarked an American colonel after the downing of a drone in Bosnia in the 1900s. Lebow is famous for challenging the inherent philistinism of neopositivism in American social science. He has read the Greeks and knows his Thucydides, the very ﬁrst military historian (the man who invented the genre) and who called war “the human thing.” It is humanity that the neopositivists largely ignore. As in Lebow’s last book, A Cultural Theory of International Relations, he challenges the realist emphasis on material factors, stressing instead **motives deriving from the need of states for reputation, status, and standing. States, like people, need to be esteemed: they need to be accorded a ranking among other states, and they need to be honored. And they are willing to avenge themselves for any slight they feel has been inﬂicted upon them**

#### B. Economic interdependence doesn’t check

Antov 11 [Michael – Department of Political Science at Duke University, “Economic Interdependence and International Conflict: The Implications of Membership in International Economic, Financial, and Monetary Organizations and Multilateral Preferential Trade Agreements”, December 15th, 2011, <http://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/5095/2011-12-15%20Milen%20Antov%20Senior%20Thesis.pdf?sequence=1>, Chetan]

In contrast to the liberal arguments, realists have argued that in an anarchic world in which states are solely concerned with preserving their existence, the more interactions among states there are, the higher the likelihood of conflict (Mearsheimer, 1995). That is, **economic interdependence provides** yet another potential **interstate asymmetry and is** thus **a reason for conflict initiation.** Most notably in the economic interdependence – conflict debate, Katherine **Barbieri’s empirical tests have shown that bilateral trade increases the probability of** MIDs **(militarized interstate disputes).** (1996, 2001, 2002). Her central claim is that, “rather than inhibiting conflict, extensive economic interdependence increases the likelihood that dyads will engage in militarized interstate disputes” (1996: 29). Barbieri recognizes that low to moderate degrees of interdependence may reduce the likelihood of conflict, but she argues that, the more extensive the linkages become, the more likely interdependence will have the opposite effect. As Maoz points out, another powerful realist theory is that **states’ strategic interests matter more than economic interdependence does – countries can be economically interdependent and still fight over non-economic interests** (2009). Realists have focused on the causes of war and “have emphasized the conflictual aspects of international transactions whereas liberals clearly emphasize the beneficial aspects. From this different starting point, realists come to the conclusion that **[economic] interdependence either increases the likelihood of war or is not related to war initiation**” (McMillan, 1997: 40). Moreover, it should be noted that realists are above all concerned with war (in terms of armed conflict with at least 25 battle-related deaths or other much higher death thresholds), while liberals have considered a diversity of conflict types, primarily focusing on MIDs.

#### C. Nuclear taboo is eroding

**Potter 10** [Dr. William Potter is Sam Nunn and Richard Lugar Professor of Nonproliferation Studies and Director of the James Martin Center for Nonproliferation Studies at the Monterey Institute of International Studies (MIIS). “In Search of the Nuclear Taboo: Past, Present, and Future” Proliferation Papers, No. 31, Winter 2010, Chetan]

**Less positive indicators of the vitality and durability of any non-use norm**, however, also **are in evidence**. A short list of bad news items includes: **the rise in the threat of** high consequence **nuclear terrorism** involving both improvised nuclear devices and intact nuclear weapons, **the failure of the CTBT to enter into force**, **the growing reliance on nuclear weapons** by some nuclear weapons possessors **to compensate for shortcomings in manpower and**/or **conventional weapons** (e.g., the Russian Federation and Pakistan), the disavowal by the United States during the Bush administration and, more recently by the Russian Federation, of a number of the “13 Practical Steps on Disarmament” adopted at the 2000 NPT Review Conference,12 stalled negotiations between the United States and the Russian Federation over the extension of several key nuclear arms control treaties that will soon expire, the barren results of the 2005 NPT Review Conference and less than encouraging indications for the next Review Conference in 2010, and **the erosion of the perceived benefits of non-nuclear weapon status** accentuated by the U.S.-India deal and the associated exemption granted to India by the Nuclear Suppliers Group in 2008. Perhaps most troubling is the potential for rapid escalation from conventional to nuclear weapons use in several regions, especially in South Asia. Space does not allow a discussion of all of the aforementioned positive and negative indicators, their impact on the probability that past **restraint with** respect to **nuclear weapons use will** either persist or **lapse**, or the likelihood of occurrence of specific breach scenarios. An examination of **several trends**, however, may **provide some clues as to** the durability of non-use and the conditions that might trigger at least **a departure from the current norm/tradition/taboo.**

#### Nuclear war causes warming

Turco et. Al 08

Toon: chair of the Dept of Atmospheric and Oceanic Sciences and a member of the Laboratory for Atmospheric and Space Physics at the University of Colorado @ Boulder. Robock is a Proff of atmospheric science at Rutgers University in New Brunswick, New Jersey. Turco is a professor of atmospheric science at the University of California, Los Angeles, (Owen B. Toon, Alan Robock, and Richard P. Turco, “Environmental consequences of nuclear war,” 2008 American Institute of Physics, December 2008 Physics Today 37-42, http://www.plu.edu/~haykm/332\_Course\_Material/current\_events/NuclearWar.pdf)

Complementary to temperature change is radiative forcing, the change in energy flux. Figure 3b shows how nuclear soot changes the radiative forcing at Earth’s surface and com- pares its effect to those of two well-known phenomena: warming associated with greenhouse gases and the 1991 Mount Pinatubo volcanic eruption, the largest in the 20th century. Since the Industrial Revolution, greenhouse gases have increased the energy flux by 2.5 W/m. The transient forcing from the Pinatubo eruption peaked at about −4 W/m 2 (the minus sign means the flux decreased). One implication of the figure is that even a regional war between India and Pakistan can force the climate to a far greater degree than the greenhouse gases that many fear will alter the climate in the foreseeable future. Of course, the durations of the forcings are different: The radiative forcing by nuclear-weapons-gen- erated soot might persist for a decade, but that from green- house gases is expected to last for a century or more, allow- ing time for the climate system to respond to the forcing. Accordingly, while the Ice Age–like temperatures in figure 3a could lead to an expansion of sea ice and terrestrial snow- pack, they probably would not be persistent enough to cause the buildup of global ice sheets. Agriculture responds to length of growing season, tem- perature during the growing season, light levels, precipita- tion, and other factors. The 1980s saw systematic studies of the agricultural changes expected from a nuclear war, but no such studies have been conducted using modern climate models. Figure 4 presents our calculations of the decrease in length of the growing season—the time between freezing temperatures—for the second summer after the release of soot in a nuclear attack.

#### -- War causes environmental collapse

Adley and Grant 4 (Jessica and Andrea, Sierra Club of Canada, “The Environmental Consequences of War”, 8-24, http://www.sierraclub.ca/national/postings/war-and-environment.html)

Throughout history, war has **invariably resulted** **in environmental destruction**. However, advancements in military technology used by combatants have resulted in increasingly severe environmental impacts. This is well illustrated by the devastation to forests and biodiversity caused by modern warfare. Military machinery and explosives have caused **unprecedented levels of deforestation** and habitat destruction. This has resulted in a serious disruption of ecosystem services, including erosion control, water quality, and food production. A telling example is the destruction of 35% of Cambodia’s intact forests due to two decades of civil conflict. In Vietnam, bombs alone destroyed over 2 million acres of land.[13] These environmental catastrophes are aggravated by the fact that ecological protection and restoration become a **low priority** during and after war. The threat to biodiversity from combat can also be illustrated by the Rwanda genocide of 1994. The risk to the already endangered population of mountain gorillas from the violence was of minimal concern to combatants and victims during the 90-day massacre.[14] The threat to the gorillas increased after the war as thousands of refugees, some displaced for decades, returned to the already overpopulated country. Faced with no space to live, they had little option but to inhabit the forest reserves, home to the gorilla population. As a result of this human crisis, conservation attempts were impeded. Currently, the International Gorilla Programme Group is working with authorities to protect the gorillas and their habitats. This has proven to be a challenging task, given the complexities Rwandan leaders face, including security, education, disease, epidemics, and famine.[15

#### Coral reefs are resilient—able to bounce back from multiple disturbances

Bruno 08(John, marine ecologist and conservation biologist, Associate Professor at the University of North Carolina at Chapel Hill, Ph.D. from Brown University in Ecology and Evolutionary Biology. Last updated 8/26/08 [originally published 12/19/07]. “Coral reefs and climate change.” http://www.eoearth.org/article/Coral\_reefs\_and\_climate\_change)

We are also learning that reefs are still somewhat resilient and under some conditions have the ability to recover from major impacts fairly quickly. Reefs devastated by bleaching in 1998 in many countries in the Indian, Pacific and Caribbean oceans are rapidly recovering. Even some reefs that were **highly degraded by multiple disturbances** have shown signs of recovery. In fact, despite the general regional and global downward trends, coral cover increased on nearly half of the world’s reefs over the last decade. This suggests that we are not too from reaching a large-scale dynamic equilibrium. In fact, coral cover in some regions such as the Great Barrier Reef has been more or less static for the last 10-20 years and in others such as the eastern Caribbean it appears to be increasing slightly. Perhaps, by reducing some local stressors and curbing climate change, the current equilibrium state of reefs can be maintained or possibly moved to a higher point. Of course this assumes that the frequency, scale and magnitude of impacts don’t increase, which given the best available climate forecasts seems unlikely.

## 2NC – T, Case

### Not Procurement – A2: We Meet

#### Financial incentives excludes government purchasing---that’s voluntary or regulatory support

**Menz, 5 -** Faculty of Economics and Finance, School of Business, Clarkson University, Bertrand H. Snell Hall, Potsdam, NY, also from the Center for International Climate and Environmental Research, Oslo (CICERO), Norway (Fredric, “Green electricity policies in the United States: case study,” Energy Policy, December, Science Direct) **Italics in original**

There is considerable variation among states in both their regulatory environments and the policies that have been implemented to promote green electricity. In the following discussion, state and local policy instruments are categorized as financial incentives, rules and regulations, and voluntary measures.[7](http://www.sciencedirect.com.proxy.lib.umich.edu/science/article/pii/S0301421504001648#fn7)Financial incentives include various subsidies and/or funding in direct support of green electricity projects, tax incentives (credits, deductions, or exemptions), and provisions for zero-interest or low-interest loans. Rules and regulations include requirements that utilities distribute a minimum share of electricity from renewable or green energy sources, green power purchase requirements for government entities, and net-metering requirements for consumers with small renewable generating facilities. Voluntary measures include green power products aimed at electricity consumers, green power certificate programs, and other programs to increase market support for renewable energy technologies.

### Not Procurement – 2NC Overview

#### Topical Affs must increase financial incentives – that requires the government doing something that motivates investment. That is distinct from the plan because procurement bypasses the investment process and just buys the technology – that’s Nelson.

#### Incentives are divided into three distinct categories – there is a difference between “financial incentives” and “nonfinancial incentives” – financial incentives actually promote investment in new technology, but nonfinancial incentives make a technology cost competitive by artificially creating a buyer for that technology – that’s Czinkota. Prefer it because it’s about investment strategy and has intent to define.

#### There’s a clear and fair list of topical affs: loans, loan guarantees, tax credits, rebates, direct grants are all topical incentive affs, not to mention every restriction they could have read.

#### Here’s evidence that there is a topical version of their plan – governmental definitions conclude you can use financial incentives to purchase new technology, but that is distinct from procurement.

DOE 7 (Department of Energy, “Regulatory Impact Analysis for Today's Energy Conservation Standards for Residential Furnaces and Boilers,” September, http://www1.eere.energy.gov/buildings/appliance\_standards/residential/pdfs/fb\_fr\_tsd/ria.pdf)

2.2 Non-Regulatory Policy Assumptions

2.2.1 No New Regulatory Action

The case in which no new regulatory action is taken with regard to residential furnace and boiler efficiency constitutes the base case scenario described in Chapter 10 of the Furnace and Boiler TSD. 1 This case defines the basis of comparison for all other scenarios. By definition, no new regulatory action yields zero energy savings and an NPV of zero dollars.

2.2.2 Financial Incentives Policies

DOE considered scenarios in which the Federal government would provide two types of financial incentives: **tax credits and rebates**. Tax credits could be granted to consumers who purchased target-level furnace and boiler equipment, or the government could issue tax credits to manufacturers to offset costs associated with producing such equipment. The government also could provide consumers with a cash rebate at the time of purchase. DOE’s evaluation of financial incentive policies used a comprehensive study of the potential for energy efficiency in California performed by Xenergy, Inc., which summarizes experience with various utility rebate programs. 2 Xenergy developed a re-parameterized, mixedsource information diffusion model to estimate market impacts induced by financial incentives for energy-efficient appliances. The basic premise of this mixed-source model is that information diffusion drives technology adoption. The model is formulated to characterize the influences of both internal and external sources of information on consumer behavior by superimposing two components in the equation, each capturing the effect of one of two different types of information source. The effects of these two types of information diffusion mechanisms are different. Internal sources of information influence consumers to purchase new products due mainly to word-of-mouth from early adopters, while external information sources influence consumers to change their adoption decisions as a result of marketing efforts and information coming from outside the consumer group. The mixed-source model describes a combined impact of the two information-source types, and specific parameterization determines consumer adoption behavior. (Appendix X of the TSD contains further details.) Xenergy’s model combined these two information diffusion mechanisms and generated a set of “implementation curves,” which Xenergy calibrated using evaluation data from utility rebate programs conducted in the1990s. Consumer response to rebate incentives appears to be a combination of the two information source types. The implementation curves illustrate the increased penetration of efficient equipment (i.e., increased market share) as a result of consumer response to benefit/cost (B/C) ratio changes induced by a specific rebate program. The implementation curves are used to depict various diffusion patterns based on perceived barriers to consumer purchase of high-efficiency equipment. There are implementation curves for varying levels of market barriers, from “no barriers” to “extremely high barriers.” These curves provide a means to study the impact of changing the B/C ratio, by reducing the initial equipment cost through financial incentives, on the consumer participation rate. To further understand the impacts of financial incentives policies, DOE used studies on forecasting the impact of consumer tax credits. 3, 4 This research differentiated the impact of tax credits into the “direct price effect,” which arises from the incremental equipment cost savings, and the “announcement effect,” which is independent of the rebate amount. The announcement effect derives from the credibility that a particular technology receives from its inclusion in an incentive program, as well as changes in product marketing strategy, and the resulting modifications in markups and pricing. DOE assumed that the direct price effect and the announcement effect would also apply to rebate programs, and that half of the increases in RIA-5 market penetration associated with rebates would be due to the direct price effect and half to the announcement effect. Consumer Rebates DOE modeled the impact of the consumer rebate policy by determining the increase in market penetration of target-level equipment relative to the base case. For non-weatherized gas furnaces, DOE estimated the impact of increasing the B/C ratio via a rebate that paid 26 percent of the incremental installed cost between a non-weatherized gas furnace meeting the base case efficiency level a and a unit meeting the target efficiency. DOE based the 26 percent rebate amount on rebate programs for condensing gas furnaces throughout the nation. 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 The average rebate in these programs amounted to about 26 percent of the incremental installed cost for condensing furnaces. For gas boilers, DOE assumed that the rebate would cover 60 percent of the incremental installed cost between a boiler meeting the base case efficiency level and a unit meeting the target efficiency. It based this amount on the average rebate level in programs for 85 percent AFUE gas boilers, b which amounted to about 60 percent of incremental installed cost. 5, 7, 8, 9, 10, 11, 15 DOE assumed the rebates would remain in effect until they had transformed the market so that the market shift in efficiency shares seen in the first year of the program would be maintained throughout the forecast period (2015–2038). DOE first calculated the B/C ratio for the unit meeting the target level relative to the base case with no rebate. It then calculated another B/C ratio for the unit meeting the target level, with a rebate, relative to the base case unit. Because of the incremental cost reduction due to the rebate, the B/C ratio for the rebate policy unit is larger (see Table RIA.3). a The base case is a market weighted-average of units at several AFUE levels. b While the target level (82 percent) is lower than 85-percent AFUE for these rebate programs, DOE assumed that a rebate program could be designed to pay an equivalent percentage of the incremental installed costs of the targeted gas boilers. RIA-6 Table RIA.3 Benefit/Cost Ratios for Today's Standard and Rebate Policy Cases NWGF\* at 90% AFUE GB\*\* at 82% AFUE Benefit (Lifetime Operating Cost Savings) $524 $333 Incremental Installed Cost (Increased Installed Cost) $698 $168 B/C Ratio with no rebate 0.8 2.0 Rebate Amount Adjusted Incremental Installed Cost (Increased Installed Cost after Rebate) $180 $518 $101 $67 B/C Ratio for Rebate Policy Case 1.0 5.0 \*NWGF = non-weatherized gas furnace \*\*GB = gas boiler DOE then used the curves shown in Figures RIA.1, RIA.2, RIA.4, and RIA.5 to estimate the increased percentage of consumers who would purchase the units that meet the policy target levels if given a rebate incentive. For non-weatherized gas furnaces at a 90-percent AFUE standard level, DOE chose the “moderate barriers,” since 90 percent AFUE imposes an economic burden for a large fraction of southern customers. For gas boilers at the 82-percent AFUE standard level, DOE chose the “low barriers,” since these efficiency levels are a common product with relatively large market share in 2004. DOE also used the “low barriers” curve for the other product classes. Figures RIA.1 and RIA.2 show the penetration rates of target-level units as a function of B/C ratios. Using this method, DOE estimated that, for the non-weatherized gas furnace product class, the market share of equipment meeting the policy target due to a rebate policy would increase by 1.2 percent at a target level of 90-percent AFUE. For the gas boiler product class, DOE estimated that the market share of equipment meeting the policy target due to a rebate policy would increase by 19 percent for 82-percent AFUE units. To calculate the impacts of this policy, DOE adjusted the base case shipments projection in the NES model to reflect these percentage increases in market share of efficient furnace and boiler models. RIA-7 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% 0 2 4 6 8 10 12 14 Participant Benefit-Cost Ratio Max mu i m Penetration Rate Moderate Barriers Curve Penetration Rate = 1.1% at B/C ratio of 0.8 Penetration Rate = 2.3% at B/C ratio of 1.0 Change of Penetration Rate = 1.2% Figure RIA.1 Market Penetration Curve for Non-Weatherized Gas Furnaces at 90 Percent AFUE Level 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% 0 2 4 6 8 10 12 14 Participant Benefit-Cost Ratio Max mi um Penetrat oi n Rate Low Barriers Curve Penetration Rate = 38% at B/C ratio of 2 Penetration Rate = 57% at B/C ratio of 5 Change of Penetration Rate = 19% Figure RIA.2 Market Penetration Curve for Gas Boilers at 82 Percent AFUE Level RIA-8 Consumer Tax Credits DOE assumed a consumer tax credit equivalent to the amount covered by rebates (i.e., 26 percent of the incremental cost between non-weatherized gas furnace base case equipment and equipment meeting the policy target levels, and 60 percent of the incremental cost for gas boilers). DOE estimated that the consumer participation rate would be lower than that for consumer rebates. Research on tax credits has shown that the time delay to the consumer in receiving a reimbursement via tax credit, plus the added transaction costs in tax return preparation, make the tax credit incentive less effective than a rebate received at the time of purchase. Based on previous analysis, 16 DOE assumed that only 60 percent of the customers who would take advantage of a rebate would take advantage of the tax credit. Using a similar approach as for the rebate policy, DOE estimated that the market share of target-efficiency gas furnace units would increase due to consumer tax credits by 0.7 percent over the base case at the 90-percent AFUE level. For gas boilers at 82-percent AFUE, the market share would increase by 12.5 percent. DOE assumed the impact of this policy would be to permanently transform the market so that the shipment-weighted efficiency gain seen in the first year of the program would be maintained throughout the forecast period. Manufacturer Tax Credits DOE assumed that a manufacturer tax credit program would effectively result in a lower price to the consumer by an amount equivalent to that provided by rebates (i.e., 26 percent of the incremental price difference for furnaces meeting base case efficiency levels and those meeting the policy targets, and 60 percent of the incremental price difference for boilers). Because these tax credits would go to manufacturers instead of consumers, DOE assumed that manufacturers would pass on the reduced costs, causing the direct price effect. However, DOE assumed that the announcement effect would not occur because the program would not be visible to the consumers. Since the direct price effect is approximately equivalent to the announcement effect, 3 DOE assumed that half of the consumers assumed to take advantage of consumer tax credits would purchase more-efficient products with a manufacturer tax credit program. As a result, DOE estimated that the market share of efficient non-weatherized gas furnaces would increase due to manufacturer tax credits by 0.4 percent over the base case at the 90-percent AFUE standard level and by 6.2 percent for gas boilers at the 82-percent AFUE standard level. DOE assumed the impact of this policy would be to permanently transform the market so that the shipment-weighted efficiency gain seen in the first year of the program would be maintained throughout the forecast period.

2.2.3 Voluntary Energy-Efficiency Targets

For a non-weatherized gas furnace target level of 90-percent AFUE, DOE assumed that the voluntary target would be achieved through manufacturer participation in a gradual phaseout of production of units below 90-percent AFUE. It assumed that this phaseout would increase from 2015. 17 RIA-9 For gas boilers at 82-percent AFUE, DOE modeled the voluntary efficiency target policy assuming expansion of existing Energy Star endorsement labeling programs conducted by the Environmental Protection Agency and DOE for these two products. 18 The Energy Star program sets minimum energy-efficiency specifications for various products, including furnace and boiler equipment. Energy Star encourages consumer adoption of these products through marketing to promote consumer label recognition, adoption of the specifications by various efficiency incentive programs, and manufacturer production and promotion of Energy Star-compliant appliances. For gas boilers, DOE estimated that an expanded Energy Star program that targeted 82- percent AFUE equipment could moderately increase the market share at these levels. In this case, DOE used estimates of the market impact of the existing Energy Star programs. 17, 19 For gas boilers, DOE assumed the programs resulting from this voluntary efficiency targets policy would increase projected market share of the targeted units above the penetration increases estimated by the Energy Star program by 75 percent for gas boilers at the 82-percent AFUE target level. The Energy Star level for gas boilers is 85-percent AFUE. Table RIA.4 shows the estimated market share increases from the voluntary efficiency target policy. RIA-10 Table RIA.4 Increased Market Share Penetration Levels from Voluntary Furnace and Boiler Programs for Targeted Efficiency Levels\* Year of Program Non-Weatherized Gas Furnaces and Mobile Home Furnaces Weatherized Gas Furnaces Oil Furnaces Gas Boilers Oil Boilers 90% AFUE 81% AFUE 82% AFUE 82% AFUE 83% & 84% AFUE 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 0% 0% 0% 1% 2% 3% 4% 4% 5% 5% 5% 6% 6% 6% 6% 7% 7% 7% 7% 8% 8% 8% 8% 8% 0% 0% 0% 1% 2% 3% 4% 4% 5% 5% 5% 6% 6% 6% 6% 7% 7% 7% 7% 8% 8% 8% 8% 8% 0% 0% 0% 1% 2% 3% 4% 4% 5% 5% 5% 6% 6% 6% 6% 7% 7% 7% 7% 8% 8% 8% 8% 8% 0% 3% 5% 8% 10% 13% 16% 18% 21% 23% 25% 26% 26% 26% 26% 26% 26% 26% 26% 27% 27% 27% 27% 27% 0% 2% 3% 5% 7% 8% 10% 12% 13% 15% 16% 17% 18% 18% 18% 18% 19% 19% 19% 19% 20% 20% 20% 20% \* The percentages in each column refer to shares of the eligible market in each case.

2.2.4 Early Replacement

Early replacement refers to the replacement of furnace and boiler units before the end of

their useful lives. The purpose of this policy is to replace old, inefficient equipment with higherefficiency units. In the 1990s, DOE studied the feasibility of a Federal program to promote early replacement of appliances under the Energy Policy Act of 1992. 20 This study identified policy options for early replacement that included a direct national early replacement program, replacement of Federally owned appliances, promotion through equipment manufacturers, consumer incentives, incentives to utilities, and building regulations. c The analysis concluded that, while cost-effective opportunities for early replacement exist, a widespread Federal early replacement program was not economically justified. Because premature retirement means that a unit may be replaced by an appliance less efficient than the eventual replacement would probably have been, energy savings would be smaller than anticipated. Early replacement programs could increase sales volatility in the long run by (continued...) RIA-11 cFor this analysis, DOE considered a program that targets the units in the stock that have efficiency levels lower than the policy target level and encourages their early replacement with products at the target efficiency level. Shipments not affected by the early replacement program have base case efficiency levels. Shipments to new construction in 2015 and beyond are not affected by this program. (Chapter 9 of the TSD describes the general approach for estimating replacements in each year; the NES model uses a retirement function that tracks the percentage of units retiring and surviving for each vintage.) DOE assumed that a portion of the furnace and boiler units in the existing stock in 2015, the first year of the analysis period, would be replaced by models meeting the target levels. It modeled this policy by assuming an increase of 20 percent (over the natural replacement rate based on units being replaced at the end of their useful lives) in the number of replaced units in the first year. It based this level on one of the cases in the report described above. DOE assumed that the program would last as long as it took to completely replace all of the eligible furnaces and boilers in the stock in the year that the program began (2015). The policy would create a jump in shipments of equipment meeting target AFUE levels relative to the base case in the early years of the program (see Figure RIA.3). As a result, more higher-efficiency units meeting the policy targets would be quickly brought into the equipment stock, leading to an immediate gain in the weighted-average equipment efficiency compared to the base case. However, unlike the other policy cases discussed, the weighted-average efficiency would drop back down to meet the levels in the base case as the eligible stock of equipment for early replacement became depleted. (...continued) encouraging a temporary increase in production followed by a lull in demand. Early replacement could be economical in localities with high energy cost conditions or environmental constraints, when replacement appliances are much more efficient than existing stock, or when a major technology breakthrough has recently occurred, creating the need for a ready market. RIA-12 c0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 Total Sh pi ments (Mill ons i ) Base Case Early Replacement Scenario 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030 2035 Figure RIA.3 Early Replacement Shipments Projections for Non-Weatherized Gas Furnaces

2.2.5 Bulk Government Purchases

DOE assumed that a bulk government purchase policy would encourage Federal, State, and local governments to purchase equipment meeting the target levels. Aggregating public sector demand could provide a market signal to manufacturers and vendors that some of their largest customers seek suppliers with products that meet an efficiency target at good prices. This program also could induce market pull” impacts through the effects of manufacturers and vendors achieving economies of scale for high-efficiency products. DOE assumed that government agencies, such as the Department of Housing and Urban Development (HUD), would administer such a program. At the Federal level, this would be an enhancement to the existing Federal Energy Management Program (FEMP). FEMP has procurement guidelines for Federal government equipment purchasing, and Federal construction requirements include these guidelines for installing or replacing equipment. 21 DOE assumed that this policy would impact a subset of housing units for which government agencies purchase or influence the purchase of furnaces and boilers. This subset would mainly consist of public housing and housing on military bases. To represent this subset, DOE considered low-income households identified in the Residential Energy Consumption Survey (RECS) from 2001 22 (see Chapter 11 of the TSD for a description of the low-income household sample). According to RECS 2001, 7.8 percent of the households with gas furnaces and 17.5 percent of those with gas boilers were classified as low-income. DOE assumed that these same percentages of furnace and boiler shipments would go to low-income households in RIA-13 each year. To estimate the market impact, DOE considered previous analysis of the bulk government purchasing policy in the residential air conditioner RIA, 23 where it assumed a fivepercent increase in market share of higher-efficiency units over the base case due to the policy. Since DOE envisions that the policy for furnaces and boilers would build on the existing FEMP program for gas furnaces, DOE assumed that the government purchase policy would likely cause a 10-percent increase in market share in each year. Thus, an additional 10 percent (above the base case) of shipments to eligible low-income households would meet the target levels through this policy. The result is an additional penetration of equipment meeting the target efficiency levels of 0.8 percent and 1.8 percent (10 percent respectively of the low-income households with gas furnaces and gas boilers).

#### It’s a voting issue for limits –

#### They allow for hundreds of small changes. Anything that makes renewable energy more economical becomes topical – that includes eliminating tariffs, moving the grid to remote areas, adjusting price structures, changing import quotas, and not to mentions adding restrictions to coal and natural gas because it would make solar power more profitable and removes a economical obstacle for solar. That independently makes the topic bidirectional.

#### Limits outweigh – they’re the vital access point for any theory impact – its key to fairness – huge research burdens mean we can’t prepare to compete – and its key to education – big topics cause hyper-generics, lack of clash, and shallow debate – and it destroys participation

Rowland 84 (Robert C., Debate Coach – Baylor University, “Topic Selection in Debate”, American Forensics in Perspective, Ed. Parson, p. 53-54)

The first major problem identified by the work group as relating to topic selection is the decline in participation in the National Debate Tournament (NDT) policy debate. As Boman notes: There is a growing dissatisfaction with academic debate that utilizes a policy proposition. Programs which are oriented toward debating the national policy debate proposition, so-called “NDT” programs, are diminishing in scope and size.4 This decline in policy debate is tied, many in the work group believe, to excessively broad topics. The most obvious characteristic of some recent policy debate topics is extreme breath. A resolution calling for regulation of land use literally and figuratively covers a lot of ground. Naitonal debate topics have not always been so broad. Before the late 1960s the topic often specified a particular policy change.5 The move from narrow to broad topics has had, according to some, the effect of limiting the number of students who participate in policy debate. First, the breadth of the topics has all but destroyed novice debate. Paul Gaske argues that because the stock issues of policy debate are clearly defined, it is superior to value debate as a means of introducing students to the debate process.6 Despite this advantage of policy debate, Gaske belives that NDT debate is not the best vehicle for teaching beginners. The problem is that broad policy topics terrify novice debaters, especially those who lack high school debate experience. They are unable to cope with the breadth of the topic and experience “negophobia,”7 the fear of debating negative. As a consequence, the educational advantages associated with teaching novices through policy debate are lost: “Yet all of these benefits fly out the window as rookies in their formative stage quickly experience humiliation at being caugh without evidence or substantive awareness of the issues that confront them at a tournament.”8 The ultimate result is that fewer novices participate in NDT, thus lessening the educational value of the activity and limiting the number of debaters or eventually participate in more advanced divisions of policy debate. In addition to noting the effect on novices, participants argued that broad topics also discourage experienced debaters from continued participation in policy debate. Here, the claim is that it takes so much times and effort to be competitive on a broad topic that students who are concerned with doing more than just debate are forced out of the activity.9 Gaske notes, that “broad topics discourage participation because of insufficient time to do requisite research.”10 The final effect may be that entire programs either cease functioning or shift to value debate as a way to avoid unreasonable research burdens. Boman supports this point: “It is this expanding necessity of evidence, and thereby research, which has created a competitive imbalance between institutions that participate in academic debate.”11 In this view, it is the competitive imbalance resulting from the use of broad topics that has led some small schools to cancel their programs.

### Not Procurement – Limits 2NC

#### They explode limits

**Dyson et al, 3** - International Union for Conservation of Nature and Natural Resources (Megan, Flow: The Essentials of Environmental Flows, p. 67-68)

Understanding of the term ‘incentives’ varies and economists have produced numerous typologies. A brief characterization of incentives is therefore warranted. First, the term is understood by economists as incorporating both positive and negative aspects, for example a tax that leads a consumer to give up an activity that is an incentive, not a disincentive or negative incentive. Second, although incentives are also construed purely in economic terms, incentives refer to more than just financial rewards and penalties. They are the “positive and negative changes in outcomes that individuals perceive as likely to result from particular actions taken within a set of rules in a particular physical and social context.”80 Third, it is possible to distinguish between direct and indirect incentives, with direct incentives referring to **financial** or other inducements and indirect incentives referring to both variable and **enabling incentives**.81 Finally, incentives of any kind may be called ‘perverse’ where they work against their purported aims or have significant adverse side effects. ¶ Direct incentives lead people, groups and organisations to take particular action or inaction. In the case of environmental flows these are the same as the net gains and losses that different stakeholders experience. The key challenge is to ensure that the incentives are consistent with the achievement of environmental flows. This implies the need to compensate those that incur additional costs by providing them with the appropriate payment or other compensation. Thus, farmers asked to give up irrigation water to which they have an established property or use right are likely to require a payment for ceding this right. The question, of course, is how to obtain the financing necessary to cover the costs of developing such transactions and the transaction itself. ¶ Variable incentives are policy instruments that affect the relative costs and benefits of different economic activities. As such, they can be manipulated to affect the behaviour of the producer or consumer. For example, a government subsidy on farm inputs will increase the relative profitability of agricultural products, hence probably increasing the demand for irrigation water. Variable incentives therefore have the ability to greatly increase or reduce the demand for out-of-stream, as well as in-stream, uses of water. The number of these incentives within the realm of economic and fiscal policy is practically **limitless.**

### 2NC Multi-Condo Good

**Condo’s good**

**1. Neg flex – can’t use kritiks and counterplans and test the aff from different angles**

**2. Information processing – multiple choices make for more tactile and harder debate – fosters 2ac tech skills**

**3. Real-world – policy-makers aren’t forced to stick to their opinions if they realize a flaw**

**[4. Research – sides have to learn a broader variety of issues instead of relying on generics**

**5. Checks new affs – neg needs to be able to test multiple options on the fly]**

**Counter-interpretation – we get** [INSERT] **– it’s a logical fixed limit that mitigates their offense**

**Not a voter –**

**[If going for] just a reason to stick us with the CP – solves 1AR allocation**

**[If not going for] just a reason conditional worlds should be banned – solves 1AR allocation**

**AT: Strat Skew**

**No reason we skewed you any more than disads, T, or impact turns would – our advocacies aren’t contradictory**

**AT: In-depth education**

**2NR checks – still gain education but are forced to think about time allocation too – eventually will come down to the best option**

**AT: Neg Bias**

**Aff has first and last speech, gets to pick the focus of the debate, and can go for a single dropped arg in the 2ar – this topic proves there is no predictable neg ground**

**AT C/I – Dispo**

**Arbitrary and not real-world – forces us into random rules to stick us with advocacies, let’s the aff frame the debate**

### 2NC – Incentives Not Solve

#### \*Restrictions and red tape doom solvency

Szondy 12 (David, “Feature: Small Modular Nuclear Reactors - The Future of Energy?”, GizMag, 2-16, http://www.gizmag.com/small-modular-nuclear-reactors/20860/)

Challenges remain As impressive as many of these reactors sound, most of them are still in one stage or another of development or approval. It is a long way from there to flipping a switch and watching the lights go on. Most of these designs have roots that go back over half a century. In the 1950s, Admiral Hyman Rickover, the architect of the US nuclear fleet, pointed out that the small research reactors, the precursors of SMRs, had a lot of advantages. They were simple, small, cheap, lightweight, easy to build, very flexible in design and needed very little development. On the other hand, practical reactors must be built on schedule, need a huge amount of development spent on "apparently trivial matters", are expensive, large, heavy and complicated. In other words, there's a large gap between what is promised by a technology in the design phase and what it ends up as once it's built. So it is with the current stable of SMRs. Many hold great promise, but they have yet to prove themselves. Also, they raise many questions. Will an SMR need fewer people to run it? What are its safety parameters? Will they fulfill current regulations? Will the regulations need to be changed to suit the nature of SMRs? Will evacuation zones, insurance coverage or security standards need to be altered? What about regulations regarding earthquakes? Indeed, it is in government regulations that the modular reactors face their greatest challenges. Whatever the facts about nuclear accidents from Windscale to Fukushima, a large fraction of the public, especially in the West, is very nervous about nuclear energy in any form. There are powerful lobbies opposed to any nuclear reactors operating and the regulations written up by governments reflect these circumstances. Much of the cost of building nuclear plants is due to meeting all regulations, providing safety and security systems, and just dealing with all the legal barriers and paperwork that can take years and millions of dollars to overcome. Modular reactors have the advantage of being built quickly and cheaply, which makes them less of a financial risk, and factory manufacturing means that a reactor intended for a plant that missed approval can be sold to another customer elsewhere. And some SMRs are similar enough to conventional reactors that they don't face the burden of being a "new" technology under skeptical scrutiny. However, red tape is still a very real thing. Only time will tell if the small reactor becomes a common sight on our power grids, if it falls by the wayside like other technological dreams, or if it falls victim to the bureaucrats' rule book.

#### Too many other barriers to SMR deployment – the aff doesn’t solve these

**ITA, 11** – International Trade Administration (U.S. Department of Commerce, February. Manufacturing and Services Competitiveness Report. “The Commercial Outlook for U.S. Small Modular Nuclear Reactors.” http://trade.gov/mas/ian/build/groups/public/@tg\_ian/@nuclear/documents/webcontent/tg\_ian\_003185.pdf)

According to some U.S. suppliers, several other U.S. government policies may pose challenges¶ to SMR deployment. For example, to meet the requirements of the Omnibus Budget Reconcili- ation Act of 1990, as amended, the NRC assesses¶ a uniform annual fee for each licensed nuclear power reactor under 10 CFR Part 171.9 The total annual fee for each operating power reactor includes a spent fuel storage and reactor-decom- missioning annual fee. Separate from the annual fees assessed under 10 CFR Part 171, an annual premium for the nuclear liability insurance pool is required by the Price–Anderson Act. In 2009, the NRC issued an Advance Notice of Proposed Rule- making to consider whether to amend 10 CFR Part 171 to establish a variable annual fee structure for power reactors based on the reactor’s licensed power limit contained in the operating license. If the NRC issued regulations based on a variable fee structure accounting for reactor size, then it is reasonable to assume that the annual fee assessed to SMRs would be less than the annual fee as- sessed to the current large LWRs.¶ Another consideration U.S. SMR vendors have¶ to address is that the NRC’s requirement for¶ the emergency planning zones (EPZs) around reactors does not generally take into account¶ the size of a reactor. SMR vendors argue that the smaller size means that a smaller protection area could suffice, which would maintain safety while providing cost savings. The NRC’s regulations¶ do allow the size of the EPZ to be adjusted on a¶ case-by-case basis for reactors that are gas cooled (such as the high-temperature gas-cooled reactor designs mentioned earlier) or have a thermal output of less than 250 MW. This exception would cover many of the proposed SMR designs, if the vendors can demonstrate that a smaller EPZ is ac- ceptable on the basis of their emergency planning. Adjusting the 250 MW limit could cover the rest¶ of the U.S. SMR designs not currently eligible for this potential size exception. Aside from the size regulation, additional costs related to emergency planning stem from state and local regulations, which cover environmental protection, police and fire coverage, and other services. SMR vendors will need to work with operators and state and local authorities to determine if SMRs warrant adjustments to those other existing regulations.¶ Other suppliers suggest that current NRC re- quirements for staffing and security systems at¶ a reactor site would be unnecessary for an SMR, because the requirements should be tied more closely to reactor size. The staffing and security requirements (colloquially referred to as “guns and guards”) are a necessary expense for reactors to ensure the safe operation of the reactor and the security of the nuclear material. If the deployment of SMRs allows for reduction in those costs, SMRs could be more attractive to potential customers. For the NRC to consider adjustments to those re- quirements, however, SMR vendors must engage in a technical discussion with the regulator and demonstrate how the reactors could be safely and securely operated with fewer control room opera- tors and guards. U.S. suppliers also say that they enjoy a cooperative relationship with the NRC and that progress is being made on addressing those issues.

### 2NC – Natural Gas Blocks

#### Natural gas blocks SMR’s

McMahon 12 (Jeff, Contributor – Forbes, “Small Modular Nuclear Reactors By 2022 -- But No Market For Them,” Forbes, 5-23, http://www.forbes.com/sites/jeffmcmahon/2012/05/23/small-modular-reactors-by-2022-but-no-market-for-them/)

The Department of Energy will spend $452 million—with a match from industry—over the next five years to guide two small modular reactor designs through the nuclear regulatory process by 2022. But cheap natural gas could freeze even small nuclear plants out of the energy market well beyond that date. DOE accepted bids through Monday for companies to participate in the Small Modular Reactor program. A number of reactor manufacturers submitted bids, including NuScale Power and a collaboration that includes Westinghouse and General Dynamic. “This would allow SMR technology to overcome the hurdle of NRC certification – the ‘gold standard’ of the international nuclear industry, and would help in the proper development of the NRC’s regulatory framework to deal with SMRs,” according to Paul Genoa, Senior Director of Policy Development at the Nuclear Energy Institute. Genoa’s comments are recorded in a summary released today of a briefing given to Senate staff earlier this month on prospects for small modular reactors, which have been championed by the Obama Administration. DOE defines reactors as SMRs if they generate less than 300 megawatts of power, sometimes as little as 25 MW, compared to conventional reactors which may produce more than 1,000 MW. Small modular reactors can be constructed in factories and installed underground, which improves containment and security but may hinder emergency access. The same summary records doubt that SMRs can compete in a market increasingly dominated by cheap natural gas. Nuclear Consultant Philip Moor told Senate staff that SMRs can compete if natural gas costs $7 to $8 per million BTU—gas currently costs only $2 per MBTU—or if carbon taxes are implemented, a scenario political experts deem unlikely. “Like Mr. Moor, Mr. Genoa also sees the economic feasibility of SMRs as the final challenge. With inexpensive natural gas prices and no carbon tax, the economics don’t work in the favor of SMRs,” according to the summary. The SMRs most likely to succeed are designs that use the same fuels and water cooling systems as the large reactors in operation in the U.S. today, according to Gail Marcus, an independent consultant in nuclear technology and policy and a former deputy director of the Department of Energy Office of Nuclear Energy, simply because the NRC is accustomed to regulating those reactors. “Those SMR designs that use light water cooling have a major advantage in licensing and development [and] those new designs based on existing larger reactor designs, like Westinghouse’s scaled‐down 200 MW version of the AP‐1000 reactor, would have particular advantage.” This is bad news for some innovative reactor designs such as thorium reactors that rely on different, some say safer, fuels and cooling systems.

### 2NC – Long Timeframe

#### SMR’s can’t be ready until 2020 at the earliest

**Moniz, 11** – director of MIT's Energy Initiative, and director of the Laboratory for Energy and the Environment at the MIT Department of Physics (Ernest, 4/28. “The New Debate: Fukushima and Small Modular Nuclear Reactors.” http://www.theatlantic.com/technology/archive/2011/03/the-new-debate-fukushima-and-small-modular-nuclear-reactors/73084/)

A major advantage of SMRs is that their small size compared with LWRs (whose size is typically 1,000 Megawatts and now going up to 1,600 Megawatts) means that the total capital cost is more in the billion dollar range rather than a significant multiple of that. Capacity can be built up with smaller bites, and this may lead to more favorable financing terms -- a major consideration for high capital cost projects that take years to license and build. Still, the SMR must come in with a cost that is also competitive with LWRs on a unit basis; that is, the cost per installed Megawatt must be comparable or less. The LWRs have been driven to larger and larger size in order to realize economies of scale. The SMRs may be able to defeat this logic by having factory construction of the SMR or at least of its major components, presumably with economies of manufacturing, the ability to train and retain a skilled workforce at manufacturing locations, quality assurance, continuous improvement and only fairly simple construction on-site. The catch-22 is that the economies of manufacture will presumably be realizable only if there is a sufficiently reliable stream of orders to keep the manufacturing lines busy, and this in turn is unlikely unless the large number of designs is winnowed down fairly early in the game. A 2020 SMR option will be available only if we start now, and even then it will be tight. Prior to Fukushima, the Obama administration submitted to the Congress a proposed 2012 budget that would greatly enhance the level of activity in bringing SMRs to market. LWR-based technology options would be advanced towards licensing, and other SMR technologies would be supported for the remaining R&D needed to have them follow in the licensing queue. The program is modest but sensible. Obviously the Federal budget deficit makes it difficult to start any new programs, but a hiatus in creating new clean energy options -- be it nuclear SMRs or renewables or advanced batteries -- will have us looking back in ten years lamenting the lack of a technology portfolio needed to meet our energy and environmental needs economically or to compete in the global market. Let's get on with it.

### Doesn’t Solve Warming – 2NC

#### To solve warming, they need 11 thousand reactors by 2030

**Tickell, 8/20**/12 – British journalist, author and campaigner on health and environment issues, and author of the Kyoto2 climate initiative (Oliver, “Does the world need nuclear power to solve the climate crisis?” <http://www.guardian.co.uk/environment/2012/aug/20/world-need-nuclear-power-climate-crisis>)

Let's look at the figures. In 2010 the world demand for primary energy was equivalent to 12,000 million tonnes of oil (Mtoe), 87% of which was provided by oil, gas and coal. Nuclear power contributed a gross 626 Mtoe, about 5% of the total, while renewables accounted for 935 Mtoe, almost 8%. To solve the climate problem, the world must not only reverse the trend of increasing carbon emissions over the next few decades, but bring them down to less than they are now. So can nuclear power do it? Assume a 2% growth in primary energy demand per year over the next 35 years, and that demand will double to some 24,000 Mtoe. Rely on nuclear power to accommodate all the growth, and knock out 4,000 Mtoe-worth of coal, and it will have to produce 16,000 Mtoe of energy per year – a 25-fold increase on its current level. Today the world has 440 operational nuclear reactors, so 25 times more means 11,000 reactors. To have these in 35 years means building, on average, about one a day. Or in an exponential growth scenario, the world would need to sustain an annual increase of 8% per year in the number of operational nuclear reactors for 35 years. Given that nuclear power generation has flatlined over the last decade, and has sharply declined in the last few years, that looks like a tall order. There are currently plans for about 200 new nuclear reactors around the world, mainly in China, the Middle East and the USA. But few observers expect all of these to be built, since the economics of nuclear power are unattractive to private investors, owing to high construction cost, long lead time, electricity price uncertainty, political hazard and long-term liabilities. Realistically the world might build 100 or so new reactors over the coming decade or so – perhaps one every 35–50 days. Over this same period a similar number of existing reactors will reach the end of their lives and close, leading to a net growth rate close to zero.

#### The plan’s too little, too late – at best, they reduce emissions by 12 percent

**Madsen and Dutzik, 9** – Policy Analyst at Frontier Group and senior policy analyst with Frontier Group (Travis and Tony, November. With Bernadette Del Chiaro and Rob Sargent of the Environment America Research & Policy Center. “Generating Failure: How Building Nuclear Power Plants Would Set America Back in the Race Against Global Warming.” http://www.environmentamerica.org/sites/environment/files/reports/Generating-Failure---Environment-America---Web\_0.pdf)

Even with generous assumptions about speed and effectiveness, building 100 new reactors in the United States by 2030 will not reduce global warming pollution fast enough to keep our carbon emissions within budget – and therefore not fast enough to meet our goals for limiting the consequences of global warming. First, assume that the nuclear industry can deliver on its ambitious timelines and successfully complete 100 new reactors (about 100 gigawatts of generation capacity) in two decades. Then, assume that every kilowatt-hour of nuclear power would displace coal, the largest source of carbonintensive power generation. Finally, assume that next-generation nuclear reactors operate at an average of 90 percent of full capacity – an upper-bound estimate from a group of nuclear technology experts. 106 Under these best-case conditions, building 100 active nuclear reactors could prevent more than 750 million metric tons of carbon dioxide (MMTCO2 ) pollution in 2030. Overall power plant emissions would be 20 percent below 2005 levels. However, these nuclear reactors would not be able to reduce emissions while they are under construction. In other words, the nuclear path delivers a late start in cutting pollution. As a result, building 100 new reactors could only reduce cumulative power plant emissions of global warming pollution by 12 percent over the next two decades compared to doing nothing. (See Figure 5.) On this path, America would still exceed its 2010-2050 electric power emissions budget by 2025 – 25years too soon. (See “Setting a Carbon Budget for the United States” on page 13 for a brief explanation of the source of the budget line represented in Figure 5.) In conclusion, building 100 new nuclear reactors by 2030 would be too little, too late when it comes to preventing global warming pollution. By leading to a higher and later peak in emissions, using nuclear power as a primary strategy to address global warming would ensure that the United States exceeds its 2010-2050 power plant emissions budget. As a result the nuclear path would cut into what little margin of error we have, increasing the risk of catastrophic global warming.

#### Can’t solve – the US would have to bring a new reactor online every week to meaningfully dent emissions

Alvarez, 10 – Senior Scholar at the Institute for Policy Studes, where he is currently focused on nuclear disarmament, environmental, and energy policies (Robert, 2/17. “Five Reasons NOT to Invest in Nuclear Power.” http://www.huffingtonpost.com/robert-alvarez/five-reasons-not-to-inves\_b\_465585.html?)

Assuming that all $54.5 billion in nuclear loan guarantees being sought by Obama are successful -- this will provide less than one percent of the nation's current electrical generating capacity. Replacing the existing fleet of 104 reactors which are expected to shut down by 2056 could cost about $1.4 trillion. Add another $500 billion for a 50% increase above current nuclear generation capacity to make a meaningful impact on reducing carbon emissions. This means the U.S. would have to start bringing a new reactor on line at a rate of once a week to once a month for the next several decades.

#### Nuclear power is too little, too late to solve warming

**Mariotte, 7** – Executive Director of Nuclear Information and Resource Service (Michael, 11/9. “Nuclear Power in Response to Climate Change,” http://www.cfr.org/publication/14718/nuclear\_power\_in\_response\_to\_climate\_change.html)

Environmental advocates considering “reconsidering” nuclear power in light of climate change are too late. The accelerating pace of the climate crisis and the dawning realization that we no longer have the luxury of a few decades to address the crisis already have made nuclear power an irrelevant technology in terms of climate. Even if the nuclear industry had solved the safety, radioactive waste, proliferation, cost, and other issues that ended its first generation—and it hasn’t solved any of those problems—it wouldn’t matter. What nuclear power can offer for climate is simply too little, too late. The major studies that have looked at the issue—MIT, the National Commission on Energy Policy, etc.—generally agree that for nuclear to make a meaningful contribution to carbon emissions reduction would require reactor construction on a massive scale: 1,200 to 2,000 new reactors worldwide, 200 to 400 in the United States alone. And that would have to be done over the next 40 to 50 years. Pity poor Japan Steel Works, the world’s major facility for forging reactor pressure vessels (there is one other, small- capacity facility in Russia): working overtime it can produce twleve pressure vessels per year. Do the math: That’s less than half of what is needed. Even if someone put in the billions of dollars and years necessary to build a new forging facility, it’s still not enough, not fast enough. There are 104 operable reactors in the United States today. In November 2017, no matter how much taxpayer money is thrown at the nuclear industry, there will be 104—or fewer. Even with streamlined licensing procedures and certified reactor designs, it will take ten, twelve years or more to license, build and bring a single new reactor online. And since most of the reactor designs being considered are first or second of a kind, count on them taking even longer. Our energy future ultimately will be carbon-free and nuclear-free, based primarily on solar and wind power, energy efficiency, and distributed generation. What is perhaps less obvious is that the future is now. In the years we’d be waiting for that first new reactor to come online, we can install ten times or more solar and wind capacity, and save twenty times or more that much power through increased efficiency while building the mass production that reduces costs, especially for photovoltaics. By the time that first reactor could come online, solar could already be cost-competitive, while wind and efficiency already are cheaper than nuclear. We no longer have ten years to begin reducing carbon emissions. Waiting around for a few new reactors won’t help our climate, but it would waste the funds needed to implement our real energy future.

#### Nuclear takes too long to develop and doesn’t account for enough displacement to solve warming

**Squassoni, 7** – senior associate with the Nonproliferation Program at the Carnegie Endowment for International Peace (Sharon, May. “Risks and Realities: The “New Nuclear Energy Revival”.” Arms Control Today. http://www.armscontrol.org/act/2007\_05/squassoni)

Nuclear energy, relative to fossil fuels, contributes little to greenhouse gas emissions.[15] The extent to which increasing reliance on nuclear energy will solve the problem of greenhouse gas emissions, however, is doubtful. Power generation accounts for about 40 percent of greenhouse gas emissions, and transportation accounts for another 25 percent. Even optimistic scenarios of nuclear power expansion do not foresee a much-larger share for nuclear energy in overall electricity generation because, simply, electricity generation is forecasted to double by 2030.[16] Moreover, much of that electricity growth will occur in the developing world, specifically in China and India. Because China and India are not bound to Kyoto Protocol reductions, their decisions on electricity production may be influenced by other factors, including cost and, in the case of India, a decision by the Nuclear Suppliers Group to allow nuclear cooperation with a non-NPT state.[**17**] Significant nuclear expansion will likely occur only after the time frame of the Kyoto Protocol because new nuclear power reactors will require 10-15 years to become operational following a decision to build. It is likely to take even longer in “new” nuclear technology states without existing infrastructure, including a system for regulating nuclear safety. Under the most optimistic scenario (five years to build), reactors under construction now will not make a significant difference in the time frame of the Kyoto Protocol.

#### Takes too long and does nothing about transportation emissions

**Squassoni, 7** – senior associate with the Nonproliferation Program at the Carnegie Endowment for International Peace (Sharon, May. “Risks and Realities: The “New Nuclear Energy Revival”.” Arms Control Today. http://www.armscontrol.org/act/2007\_05/squassoni)

There is little doubt that nuclear energy will remain an important part of the global energy mix, but it is not the panacea that many advocates are selling. To begin with**, a nuclear renaissance will take too long to have more than a negligible impact on carbon dioxide emissions that threaten significant climate change in the next decade**. Further, the petroleum-dominated transportation sector, which accounts for 25 percent of world carbon dioxide emissions, offers few footholds now for nuclear energy substitution. (By contrast, oil only accounted for 5 percent of the global electricity mix in 2001.) In the distant future, perhaps nuclear energy may help offset transportation emissions through the production of hydrogen.

#### Nuclear could only cut emissions by 5% at most – can’t solve warming

**Beranek, 7** – Greenpeace International Nuclear Campaigner (Jan, Greenpeace, “Nuclear power is not the answer to climate change.” http://www.greenpeace.org/international/Global/international/planet-2/report/2007/11/why-nuclear-is-not-the-answer.pdf)

The nuclear industry, and some politicians, claim that nuclear power, as a low carbon source, needs to be part of the energy mix and solution. Greenpeace contends that it would cost too much to deliver too little and too late, while adding to the risk to global security. Greenpeace points to nuclear power’s high investments, regular cost overruns, long construction periods, huge subsidies, operational risks, radioactive waste production and security issues involving proliferation and terrorism. In contrast, the Energy Revolution scenario shows how to meet greenhouse gas reductions faster, more effectively and at lower cost using the proven alternatives of renewable energy technologies and energy efficiency. Limited potential The 439 operating commercial nuclear reactors iv currently supply around 15 per cent of global electricity. This represents only 6.5 per cent of world’s overall energy consumptionv . Even maintaining this current share would require a massive new build programme, given the increasing number of old plants to be shut down and projected increases in electrical demand. Most of the reactors were built in the 1980s and are on average 20 years old. Doubling the existing installed nuclear capacity of 372,000 megawatts (MWe) by 2030 would mean building hundreds of new reactors. Yet this would hardly increase the nuclear energy share in world’s total energy consumption beyond 10 per cent and would reduce total greenhouse emissions by less than 5 per cent. Achieving even this small slice of world energy supply would require an unrealistically ambitious plan: A large new nuclear reactor would need to be built and come on line every two weeks from now until 2030. Immense Costs Nuclear power is very expensive. Nuclear construction projects consistently run well over budget. Construction costs are often double original estimates. Despite 50 years of development and massive subsidies, nuclear reactors still cannot deliver proven and reliable technology at predictable costs. The industry promises new reactors at investment costs of around US $2,000 per kilowatt (kW) of installed capacity. The reality, though, indicates that it will be significantly more expensive. Past experience shows that most reactors in the United States experienced cost overruns of more than 200 per cent, as did the most recent nuclear reactors completed in India. Finland has recent experience of a new, advanced generation of reactors. Construction of Olkiluoto-3 started in 2005 but its budget has already increased from US $4.7 billion to US $6.9 billion. It has been delayed by two years and more than one thousand defects and technical problems have been discovered by the nuclear safety authority. Further delays and cost overruns are anticipated, as highlighted on page four). This project involving a 1,600 MW reactor is evidence that the cost of installing nuclear capacity can easily reach US $4,300 per kW. Recent estimates by Moody’s Investors Service give all-in reactor construction costs as US $ 5- 6,000 per kW. Investment costs needed to double global nuclear capacity, and reduce greenhouse gas emissions by less than 5 per cent – would be between two and three trillion US dollars. Long Delivery Time Dozens of governments have announced ambitious nuclear plans. Some of them are serious; some purely speculative. In a number of countries, it would take years to build up an institutional framework and infrastructure to implement a nuclear power project. Even in countries with established nuclear programmes, planning, licensing and connecting a new reactor to the grid typically takes more than a decade. Under the most favourable conditions, only a small fraction of the approximately 200 new reactors announced so far would be able to generate electricity before 2020. Most of them would make a negligible contribution to addressing climate change long after 2020. This is many years after the date by which global CO2 emissions need to peak and be reduced. Vague promises of fourth generation fission reactors, or even fusion reactors, are decades ahead, if they ever materialise or prove economically feasible. Such nuclear technologies come long after the decisive decades in which CO2 emissions have to be tackled. They are hopelessly irrelevant to combating climate change.

### XT – Transportation

#### Can’t solve without reducing transportation emissions – leading cause of warming

**Gordon, 10** – nonresident senior associate in Carnegie’s Energy and Climate Program, where her research focuses on climate, energy, and transportation issues in the United States and China (Deborah, December. “The Role of Transportation in Driving Climate Disruption.” http://carnegieendowment.org/files/transport\_climate\_disruption.pdf)

Through the twenty-first century, on-road transportation is expected to be a leading climate-forcing activity worldwide. Cars and trucks emit almost no sulfates (cooling agents) but are major emitters of carbon dioxide, black carbon, and ozone—all of which cause warming and are detrimental to human health. U.S. on-road transportation is responsible for 40 percent of global on-road climate warming (“radiative forcing” in climate terms). U.S. on-road transportation is projected to have a net radiative forcing of 66 mWm-2 on a twenty-year horizon, as shown in Figure 11. U.S. on-road transportation represents nearly half (41 percent) of global radiative forcing in this sector over a twenty-year timeframe.

### 2NC Exports

#### Natural gas demand is closely monitored – perception of the plan triggers the link

Burnes et al 12-7 (John, Lisa Epifani, Curt Moffatt, Janna Chesno, Partner – VanNess Feldman, “DOE Releases LNG Export Study and Requests Public Comment,” VanNess Feldman, 2012, http://www.vnf.com/news-alerts-778.html)

Exports of natural gas, including LNG, must be authorized by DOE’s Office of Fossil Energy. By statute, exports of LNG to FTA nations must be approved “without modification or delay”. By contrast, before approving an application to export LNG to non-FTA nations, DOE must determine that the export is and will remain in the “public interest”. DOE’s primary focus is upon the domestic need for the gas to be exported. In May 2011, DOE conditionally authorized Sabine Pass Liquefaction, LLC (Sabine Pass) to export LNG to non-FTA nations. The authorization was finalized in August 2012. This remains the only long-term DOE authorization to export LNG from the lower 48 states to non-FTA nations. In the Sabine Pass order, DOE determined that it had a continuing duty to protect the public interest, and announced that it would monitor gas supply/demand conditions in the United States and the world to ensure that the cumulative impacts of the exports authorized in the order and in future orders would not lead to a reduction in the supply of natural gas needed to meet essential domestic needs. DOE also provided notice that it would take any action in the future, including amending or even revoking export authorizations, as appropriate or necessary to protect the public interest.

#### SMRs displace gas generated electricity – increase supply, decreases price

Rosner 11 (Robert Rosner, Professor, Departments of Astronomy and Astrophysics, and Physics, and the College; Senior Fellow at the University of Chicago and Stephen M. Goldberg, Special Assistant to the Director at Argonne National Laboratory, “Small Modular Reactors – Key to Future Nuclear Power Generation in the U.S.,” November 2011. Energy Policy Institute at Chicago, The Harris School of Public Policy Studies, <https://epic.sites.uchicago.edu/sites/epic.uchicago.edu/files/uploads/EPICSMRWhitePaperFinalcopy.pdf>)

Furthermore, CBO discussed the market risk associated with GW-scale plants: Market risk is the component of risk that investors cannot protect themselves against by diversifying their portfolios. Investors require compensation for market risk because investments exposed to such risk are more likely to have low returns when the economy as a whole is weak and resources are more highly valued…In the case of nuclear construction guarantees provided to investor-owned utilities or merchant power providers, for example, plant construction may be more likely to be slowed or canceled when the demand for electricity is depressed by a weak economy. 23,24

SMRs could potentially mitigate such a risk in several ways. First, SMRs have lower precompletion risk due to shorter construction schedules (24-36 months as compared with 48 months). Second, because of their smaller size, SMRs have lower market risk because there is significantly less power than needs to be sold as compared with GW-level plants. Finally, the modular nature of SMRs affords the flexibility to build capacity on an as-needed basis. In the case of unsubsidized financing, particularly relevant to merchant markets, utility decision makers that have significant aversion to risk of future natural gas spikes (i.e., gas prices rising to about $7/Mcf or one standard deviation above the recent average behavior of natural gas prices) would possibly view alternatives to gas-fired generation as attractive options, particularly if the investment requirements are comparable – SMRs could potentially “fit the bill.”

#### Exports cause methane leaks – makes warming irreversible

**Romm 11** (Joe, Senior Fellow at American Progress, editor of Climate Progress, assistant secretary of energy for energy efficiency and renewable energy in 1997, Ph.D. in physics from MIT, “Natural Gas Bombshell: Switching From Coal to Gas Increases Warming for Decades, Has Minimal Benefit Even in 2100,” 9-9-11 <http://thinkprogress.org/climate/2011/09/09/315845/natural-gas-switching-from-coal-to-gas-increases-warming-for-decades/>)

A key finding of the NCAR study is: In summary, our results show that the substitution of gas for coal as an energy source results **in increased** rather than decreased **global warming** for many decades — out to the mid 22nd century for the 10% leakage case. This is in accord with Hayhoe et al. (2002) and with the less well established claims of Howarth et al. (2011) who base their analysis on Global Warming Potentials rather than direct modeling of the climate…. The most important result, however, in accord with the above authors, is that, unless leakage rates for new methane can be kept below 2%, substituting gas for coal is not an effective means for reducing the magnitude of future climate change. What is the leakage rate for methane? Well, as I’ve written, we don’t know exactly because the gas companies won’t release all of their data. We do know that total life-cycle leakage and fugitive emissions from extraction, production, transport, and consumption is higher for shale gas than conventional gas. The controversial — but peer-reviewed — paper by Cornell’s Robert Howarth, which I wrote about here, seeks to quantify the impact of the leakage from the **best available data**. It **concluded**: Natural gas is composed largely of methane, and 3.6% to 7.9% of the methane from shale-gas production escapes to the atmosphere in venting and leaks over the life-time of a well. These methane emissions are at least 30% more than and perhaps more than twice as great as those from conventional gas. The higher emissions from shale gas occur at the time wells are hydraulically fractured — as methane escapes from flow-back return fluids — and during drill out following the fracturing. Methane is a **powerful greenhouse gas**, with a global warming potential that is far greater than that of carbon dioxide, particularly over the time horizon of the first few decades following emission.

#### Plan kills Russia’s economy

Mead 12

Walter Russell Mead, April 25, 2012 (Professor of Foreign Affairs and Humanities at Bard College, Henry A. Kissinger senior fellow for U.S. foreign policy at the Council on Foreign Relations (CFR), and Editor-at-Large of The American Interest magazine), , The American Interest, North American Shale Gas Gives Russia Serious Headache, <http://blogs.the-american-interest.com/wrm/2012/04/25/north-american-shale-gas-gives-russia-serious-headache/>

North America’s shale gas boom is chipping away at the market for gas producers like Russia. What’s more, if the United States becomes a gas exporter, Russia’s customers (especially in Europe) could decide to cancel expensive contracts with Gazprom in favor of cheaper American natural gas. “If the US starts exporting LNG to Europe and Asia, it gives [customers there] an argument to renegotiate their prices with Gazprom and Qatar, and they will do it,” says Jean Abiteboul, head of Cheniere supply & marketing. Gazprom supplied 27 percent of Europe’s natural gas in 2011. While American gas is trading below $2 per MMBTU (million British thermal units), Gazprom’s prices are tied to crude oil markets, and its long-term contracts charge customers roughly $13 per MMBTU, says the *FT*. European customers would love to reduce their dependence on Gazprom and start to import American gas. Already Gazprom has had to make concessions to its three biggest customers, and others are increasingly dissatisfied with their contracts. Worse, from Russia’s point of view: evidence that western and central Europe contain substantial shale gas reserves of their own. Fracking is unpopular in thickly populated, eco-friendly Europe, but so are high gas prices. All this ought to give Russia serious heartburn. Eroding Gazprom’s dominance of the European energy market would be a major check on Russian economic growth and political influence.

**Goes nuclear and turns case**

**Filger 9** (Sheldon, Columnist and Founder – Global EconomicCrisis.com, “Russian Economy Faces Disasterous Free Fall Contraction”, <http://www.huffingtonpost.com/sheldon-filger/russian-economy-faces-dis_b_201147.html>)

In Russia, historically, economic health and political stability are intertwined to a degree that is rarely encountered in other major industrialized economies. It was the economic stagnation of the former Soviet Union that led to its political downfall. Similarly, Medvedev and Putin, both intimately acquainted with their nation's history, are unquestionably alarmed at the prospect that Russia's economic crisis will endanger the nation's political stability, achieved at great cost after years of chaos following the demise of the Soviet Union. Already, strikes and protests are occurring among rank and file workers facing unemployment or non-payment of their salaries. Recent polling demonstrates that the once supreme popularity ratings of Putin and Medvedev are eroding rapidly. Beyond the political elites are the financial oligarchs, who have been forced to deleverage, even unloading their yachts and executive jets in a desperate attempt to raise cash. Should the Russian economy deteriorate to the point where economic collapse is not out of the question, the impact will go far beyond the obvious accelerant such an outcome would be for the Global Economic Crisis. There is a geopolitical dimension that is even more relevant then the economic context. Despite its economic vulnerabilities and perceived decline from superpower status, Russia remains one of only two nations on earth with a nuclear arsenal of sufficient scope and capability to destroy the world as we know it. For that reason, it is not only President Medvedev and Prime Minister Putin who will be lying awake at nights over the prospect that a national economic crisis can transform itself into a virulent and destabilizing social and political upheaval. It just may be possible that U.S. President Barack Obama's national security team has already briefed him about the consequences of a major economic meltdown in Russia for the peace of the world. After all, the most recent national intelligence estimates put out by the U.S. intelligence community have already concluded that the Global Economic Crisis represents the greatest national security threat to the United States, due to its facilitating political instability in the world. During the years Boris Yeltsin ruled Russia, security forces responsible for guarding the nation's nuclear arsenal went without pay for months at a time, leading to fears that desperate personnel would illicitly sell nuclear weapons to terrorist organizations. If the current economic crisis in Russia were to deteriorate much further, how secure would the Russian nuclear arsenal remain? It may be that the financial impact of the Global Economic Crisis is its least dangerous consequence.

### 2NC Slow Now

#### Gas and developing countries offset US emissions reductions

Marshall 12 (Michael, climate reporter – New Scientist, 8/20/’12, <http://www.newscientist.com/article/dn22196-lowest-us-carbon-emissions-wont-slow-climate-change.html>)

It looks like good news, but it's not. The US has recorded a sharp fall in its greenhouse gas emissions from energy use. Thanks to a rise in the use of natural gas, emissions are at their lowest since 1992. The fall will boost the natural gas industry, but in reality the emissions have simply been exported. According to the US Energy Information Administration (EIA), energy-related CO2 emissions in the first quarter of 2012 were the lowest in two decades. Emissions are normally high between January and March because people use more heating in the winter, but last winter was mild in the US. The EIA says that an increase in gas-fired power generation, and a corresponding decline in coal-fired, contributed to the fall in emissions. Burning natural gas produces fewer emissions than burning coal, and natural gas is currently unusually cheap in the US thanks to a glut of shale gas extracted by hydraulic fracturing or "fracking". If gas companies continue to expand their shale gas operations, the US could generate even more electricity from gas, and its emissions could fall for several years, says Kevin Anderson of the University of Manchester, UK. However, this will not slow down climate change. US coal consumption has fallen, but production is holding steady and the surplus is being sold to Asia. As a result, the US is effectively exporting the coal-related emissions. "Gas is less bad than burning the coal, but only if you keep the coal in the ground," Anderson says. Proponents of natural gas argue that it is a "transition fuel" that we can burn for a few years while we install low-carbon infrastructure such as wind farms and nuclear power stations. That viewpoint looks increasingly untenable. "If we want even an outside chance of [limiting global warming to] 2 °C, there is no emission space for gas," Anderson says. In order to hit the 2 °C target, global emissions need to peak by 2020 before dropping again, which means making a rapid transition to low-carbon energy.

**Decade of cooling – 98-08 was the coolest decade on record**

**Carter 11** (Robert M., PhD, University of Cambridge, marine geologist and research professor at James Cook University in Queensland, Australia, Climate Change Reconsidered: 2011 Interim Report, 8-29-11, <http://www.nipccreport.org/reports/2011/pdf/FrontMatter.pdf>)

Recent reconstructions of climate history find the human influence does not stand out relative to other, natural causes of climate change. While global warming theory and models predict polar areas would warm most rapidly, the warming of Greenland was 33 percent greater in magnitude in 1919–1932 than it was in 1994–2007, and **Antarctica** **cooled** during the second half of the twentieth century.  Perlwitz et al. (2009) reported ―**a decade-long decline** (1998–2007) in globally averaged temperatures from the record heat of 1998‖ and noted U.S. temperatures in 2008 ―not only declined from near-record warmth of prior years, but were in fact colder than the official 30-year reference climatology … and further were **the coldest** since at least 1996.‖  New research disputes IPCC‘s claim that it has ferreted out all significant influences of the world‘s many and diverse urban heat islands from the temperature databases they use to portray the supposedly unprecedented warming of the past few decades.

**Temperature tracking data confirms**

**Morano 8** (Marc Morano, the communications director for the Republican minority on the Senate Environment and Public Works Committee, “Earth's 'Fever' Breaks: Global COOLING Currently Under Way,” 2-27-8, http://epw.senate.gov/public/index.cfm?FuseAction=Minority.Blogs&ContentRecord\_id=5CEAEDB7-802A-23AD-4BFE-9E32747616F9

Excerpt: All four major global temperature tracking outlets (Hadley, NASA's GISS, UAH, RSS) have released updated data. All show that over the past year, global temperatures have **dropped precipitously**. A compiled list of all the sources can be seen here. The total amount of cooling ranges from 0.65C up to 0.75C -- a value large enough to erase nearly **all the global warming** recorded over the past 100 years. All in one year time. For all sources, it's the single fastest temperature change every recorded, either up or down. […] Over the past year, anecdotal evidence for a cooling planet has exploded. China has its coldest winter in 100 years. Baghdad sees its first snow in all recorded history. North America has the most snowcover in 50 years, with places like Wisconsin the highest since record-keeping began. Record levels of **Antarctic sea ice**, record cold in Minnesota, Texas, Florida, Mexico, Australia, Iran, Greece, South Africa, Greenland, Argentina, Chile -- the list goes on and on. No more than anecdotal evidence, to be sure. But now, that evidence has been supplanted by hard scientific fact. All four major global temperature tracking outlets (Hadley, NASA's GISS, UAH, RSS) have released updated data. All show that over the past year, global temperatures have dropped precipitously.

**Peer-reviewed sources agree**

**Carter 11** (Robert M., PhD, University of Cambridge, marine geologist and research professor at James Cook University in Queensland, Australia, Climate Change Reconsidered: 2011 Interim Report, 8-29-11,

<http://www.nipccreport.org/reports/2011/pdf/03Temperature.pdf>)

In a paper titled ―A strong bout of natural **cooling in 2008**‖ published in Geophysical Research Letters Perlwitz et al. (2009) discuss the ―**precipitous drop** in North American temperature in 2008, commingled with a decade-long fall in global mean temperatures.‖ The authors begin their narrative by noting there has been ―a decade-long decline (1998–2007) in globally averaged temperatures from the record heat of 1998,‖ citing Easterling and Wehner (2009). In further describing this phenomenon, they note U.S. temperatures in 2008 ―not only declined from near record warmth of prior years, but were in fact colder than the official 30-year reference climatology (0.2°C versus the 1971–2000 mean) and further were the coldest since at least 1996.‖ With respect to the geographical origin of this ―natural cooling,‖ as they describe it, the five researchers point to ―a widespread coolness of the tropical-wide oceans and the northeastern Pacific,‖ focusing on the Niño 4 region, where they report ―anomalies of about -1.1°C suggest a condition colder than any in the instrumental record **since 1871**.‖ The researchers then push ahead in search of the cause of the global and U.S. coolings that sparked their original interest, seeking out what connects them with other more primary phenomena, the anomalous and significant oceanic coolings. Perlwitz et al. first **discount volcanic** eruptions, noting ―there were no significant volcanic events in the last few years.‖ Next, they write that solar forcing ―is also unlikely,‖ because its radiative magnitude is considered to be too weak to elicit such a response. And these two castaway causes thus leave them with ―coupled ocean-atmosphere-land variability‖ as the ―most likely‖ cause of the anomalous coolings.

### 2NC Irreversible

#### 6 degree warming’s inevitable

AP 9 (Associated Press, Six Degree Temperature Rise by 2100 is Inevitable: UNEP, September 24, <http://www.speedy-fit.co.uk/index2.php?option=com_content&do_pdf=1&id=168>)

Earth's temperature is likely to jump six degrees between now and the end of the century even if every country cuts greenhouse gas emissions as proposed, according to a United Nations update. Scientists looked at emission plans from 192 nations and calculated what would happen to global warming. The projections take into account 80 percent emission cuts from the U.S. and Europe by 2050, which are not sure things. The U.S. figure is based on a bill that passed the House of Representatives but is running into resistance in the Senate, where debate has been delayed by health care reform efforts. Carbon dioxide, mostly from the burning of fossil fuels such as coal and oil, is the main cause of global warming, trapping the sun's energy in the atmosphere. The world's average temperature has already risen 1.4 degrees since the 19th century. Much of projected rise in temperature is because of developing nations, which aren't talking much about cutting their emissions, scientists said at a United Nations press conference Thursday. China alone adds nearly 2 degrees to the projections. "We are headed toward very serious changes in our planet," said Achim Steiner, head of the U.N.'s environment program, which issued the update on Thursday. The review looked at some 400 peer-reviewed papers on climate over the last three years. Even if the developed world cuts its emissions by 80 percent and the developing world cuts theirs in half by 2050, as some experts propose, the world is still facing a 3-degree increase by the end of the century, said Robert Corell, a prominent U.S. climate scientist who helped oversee the update. Corell said the most likely agreement out of the international climate negotiations in Copenhagen in December still translates into a nearly 5-degree increase in world temperature by the end of the century. European leaders and the Obama White House have set a goal to limit warming to just a couple degrees. The U.N.'s environment program unveiled the update on peer-reviewed climate change science to tell diplomats how hot the planet is getting. The last big report from the Nobel Prize-winning Intergovernmental Panel on Climate Change came out more than two years ago and is based on science that is at least three to four years old, Steiner said. Global warming is speeding up, especially in the Arctic, and that means that some top-level science projections from 2007 are already out of date and overly optimistic. Corell, who headed an assessment of warming in the Arctic, said global warming "is accelerating in ways that we are not anticipating." Because Greenland and West Antarctic ice sheets are melting far faster than thought, it looks like the seas will rise twice as fast as projected just three years ago, Corell said. He said seas should rise about a foot every 20 to 25 years.

#### Low threshold—less than 2 degrees is sufficient to cause their impacts

Harvey 11 (Fiona, Environment Reporter – Guardian, 11/9, “World headed for irreversible climate change in five years, IEA warns,” <http://www.guardian.co.uk/environment/2011/nov/09/fossil-fuel-infrastructure-climate-change>)

Climate scientists estimate that global warming of 2C above pre-industrial levels marks the limit of safety, beyond which climate change becomes catastrophic and irreversible. Though such estimates are necessarily imprecise, warming of as little as 1.5C could cause dangerous rises in sea levels and a higher risk of extreme weather – the limit of 2C is now inscribed in international accords, including the partial agreement signed at Copenhagen in 2009, by which the biggest developed and developing countries for the first time agreed to curb their greenhouse gas output.

#### Too little, too late

Harris 9 (Richard, Science Reporter for National Public Radio, Peabody Award Winner, American Association for the Advancement of Science Journalism Award, “Global Warming Irreversible, Study Says,” January 26th, NPR, http://www.npr.org/templates/story/story.php?storyId=99888903)

Climate change is essentially irreversible, according to a sobering new scientific study. As carbon dioxide emissions continue to rise, the world will experience more and more long-term environmental disruption. The damage will persist even when, and if, emissions are brought under control, says study author Susan Solomon, who is among the world's top climate scientists. "We're used to thinking about pollution problems as things that we can fix," Solomon says. "Smog, we just cut back and everything will be better later. Or haze, you know, it'll go away pretty quickly." That's the case for some of the gases that contribute to climate change, such as methane and nitrous oxide. But as Solomon and colleagues suggest in a new study published in the Proceedings of the National Academy of Sciences, it is not true for the most abundant greenhouse gas: carbon dioxide. Turning off the carbon dioxide emissions won't stop global warming. "People have imagined that if we stopped emitting carbon dioxide that the climate would go back to normal in 100 years or 200 years. What we're showing here is that's not right. It's essentially an irreversible change that will last for more than a thousand years," Solomon says. This is because the oceans are currently soaking up a lot of the planet's excess heat — and a lot of the carbon dioxide put into the air. The carbon dioxide and heat will eventually start coming out of the ocean. And that will take place for many hundreds of years.

#### It’s irreversible - it’s too late to stop the greenhouse effect

Harris 9 (Richard, Science Reporter for National Public Radio, Peabody Award Winner, American Association for the Advancement of Science Journalism Award, “Global Warming Irreversible, Study Says,” January 26th, NPR, http://www.npr.org/templates/story/story.php?storyId=99888903)

Climate change is essentially irreversible, according to a sobering new scientific study. As carbon dioxide emissions continue to rise, the world will experience more and more long-term environmental disruption. The damage will persist even when, and if, emissions are brought under control, says study author Susan Solomon, who is among the world's top climate scientists. "We're used to thinking about pollution problems as things that we can fix," Solomon says. "Smog, we just cut back and everything will be better later. Or haze, you know, it'll go away pretty quickly." That's the case for some of the gases that contribute to climate change, such as methane and nitrous oxide. But as Solomon and colleagues suggest in a new study published in the Proceedings of the National Academy of Sciences, it is not true for the most abundant greenhouse gas: carbon dioxide. Turning off the carbon dioxide emissions won't stop global warming. "People have imagined that if we stopped emitting carbon dioxide that the climate would go back to normal in 100 years or 200 years. What we're showing here is that's not right. It's essentially an irreversible change that will last for more than a thousand years," Solomon says. This is because the oceans are currently soaking up a lot of the planet's excess heat — and a lot of the carbon dioxide put into the air. The carbon dioxide and heat will eventually start coming out of the ocean. And that will take place for many hundreds of years.

#### It’s too late—Earth’s fate is sealed

Adve 8 [Nagraj. Staffer for the South Asia News. “Can We Avoid ‘Dangerous’ Global Warming” One World South Asia News, 23 April 08. Lexis]

As a consequence, the Earth’s average temperature has risen about 0.8 degrees C since the Industrial Revolution, reaching 14.5 degrees C in 2005. This seemingly mild rise has already caused lands to be nibbled by rising sea levels in the Sunderbans and the Gujarat coast, the 2005 floods in Bombay which killed a thousand people, Himalayan glaciers to recede, and rainfall patterns to change. According to the UN, 66 million people were affected by floods this year in South Asia alone. What used to seem ‘natural’ phenomena are not natural any more, as Bill McKibben lamented in The End of Nature nearly 20 years ago. The problem, as Paul Brown explains in Global Warming: The Last Chance for Change, is that there’s more warming in the pipeline. There’s a lag of about 25-30 years between greenhouse gases being emitted and the full effects of their warming. So the recent climate chaos is actually the consequence of emissions in the late 1970s. The full effects of more recent emissions, including from China’s coal-based power stations that some are suddenly and rightly concerned about, will be felt in the years to come. We are committed, Brown writes, to a further 0.7 degrees C. That would add up to 1.5 degrees C above pre-industrial levels. At 1.5 degrees, 18% of the world’s species will die, and 400 million more people worldwide will be exposed to water stress. It gets worse. As the Earth gets warmer, it will trigger off certain ‘feedbacks’, which could be understood as the Earth’s systems themselves contributing to warming: as Arctic ice melts, there will be less of it to reflect heat, warming further, melting

### 2NC No XTC

#### Adaptation solves catastrophic impacts to warming

Goklany 11 -- PhD, author and researcher associated with IPCC, expert reviewer and U.S. delegate to that organization (Dr. Indur M., 12/11, "Misled on Climate Change: How the UN IPCC (and others) Exaggerate the Impacts of Global Warming," http://goklany.org/library/Reason%20CC%20and%20Development%202011.pdf)

So how much of a difference in impact would consideration of both economic development and technological change have made? If impacts were to be estimated for five or so years into the future, ignoring changes in adaptive capacity between now and then probably would not be fatal because neither economic development nor technological change would likely advance substantially during that period. However, the time horizon of climate change impact assessments is often on the order of 35–100 years or more. The Fast Track Assessments use a base year of 1990 to estimate impacts for 2025, 2055 and 2085. 39 The Stern Review’s time horizon extends to 2100– 2200 and beyond. 40 Over such periods one ought to expect substantial advances in adaptive capacity due to increases in economic development, technological change and human capital. As already noted, retrospective assessments indicate that over the span of a few decades, changes in economic development and technologies can substantially reduce, if not eliminate, adverse environmental impacts and improve human well-being, as measured by a variety of objective indicators. 41 Thus, not fully accounting for changes in the level of economic development and secular technological change would understate future adaptive capacity, which then could overstate impacts by one or more orders of magnitude if the time horizon is several decades into the future. The assumption that there would be little or no improved or new technologies that would become available between 1990 and 2100 (or 2200), as assumed in most climate change impact assessments, is clearly naïve. In fact, a comparison of today’s world against the world of 1990 (the base year used in most impacts studies to date) shows that even during this brief 20-year span, this assumption is invalid for many, if not most, human enterprises. Since 1990, for example, the portion of the developing world’s population living in absolute poverty declined from 42% to 25%, 42 and in sub-Saharan Africa Internet users increased from 0 to 50 million, while cellular phone users went from 0 per 100 to 33 per 100. 43 It should be noted that some of the newer impacts assessments have begun to account for changes in adaptive capacity. For example, the CIESIN study of 2006, in an exercise exploring the vulnerability to climate change under various climate change scenarios, allowed adaptive capacity to increase between the present and 2050 and 2100. 44 However, the researchers arbitrarily limited any increase in adaptive capacity to “either the current global mean or to a value that is 25% higher than the current value—whichever is higher.” 45 Such a limitation would, for example, have missed most of the increase in U.S. adaptive capacity during the twentieth century that virtually eliminated death and disease from climate-sensitive water-borne vector diseases. More recently, another study analyzed the sensitivity of deaths from malaria, diarrhea, schistosomiasis and dengue fever to warming, economic development and other determinants of adaptive capacity through the year 2100. 46 The results indicate, unsurprisingly, that economic development alone could reduce mortality substantially. For malaria, for instance, deaths would be eliminated before 2100 in a number of the more affluent sub-Saharan countries. 47

#### Experts agree

Hsu 10 (Jeremy, Live Science Staff, July 19, pg. <http://www.livescience.com/culture/can-humans-survive-extinction-doomsday-100719.html>)

His views deviate sharply from those of most experts, who don't view climate change as the end for humans. Even the worst-case scenarios discussed by the Intergovernmental Panel on Climate Change don't foresee human extinction. "The scenarios that the mainstream climate community are advancing are not end-of-humanity, catastrophic scenarios," said Roger Pielke Jr., a climate policy analyst at the University of Colorado at Boulder. Humans have the technological tools to begin tackling climate change, if not quite enough yet to solve the problem, Pielke said. He added that doom-mongering did little to encourage people to take action. "My view of politics is that the long-term, high-risk scenarios are really difficult to use to motivate short-term, incremental action," Pielke explained. "The rhetoric of fear and alarm that some people tend toward is counterproductive." Searching for solutions One technological solution to climate change already exists through carbon capture and storage, according to Wallace Broecker, a geochemist and renowned climate scientist at Columbia University's Lamont-Doherty Earth Observatory in New York City. But Broecker remained skeptical that governments or industry would commit the resources needed to slow the rise of carbon dioxide (CO2) levels, and predicted that more drastic geoengineering might become necessary to stabilize the planet. "The rise in CO2 isn't going to kill many people, and it's not going to kill humanity," Broecker said. "But it's going to change the entire wild ecology of the planet, melt a lot of ice, acidify the ocean, change the availability of water and change crop yields, so we're essentially doing an experiment whose result remains uncertain."

#### Warming will be slow, there’s no impact, and adaptation solves

William Yeatman 9, Energy Policy Analyst at the Competitive Enterprise Institute, February 3, 2009, “Global Warming 101: Science,” online: <http://www.globalwarming.org/2009/02/03/global-warming-101-science/>

A “planetary emergency—a crisis that threatens the survival of our civilization and the habitability of the Earth”—that is how former Vice President Al Gore describes global warming. Most environmental groups preach the same message. So do many journalists. So do some scientists.

In fact, at the 2008 annual meeting of Nobel Prize winners in Lindau, Germany, half the laureates on the climate change panel disputed the so-called consensus on global warming.

You have probably heard the dire warnings many times. Carbon dioxide (CO2) from mankind’s use of fossil fuels like coal, oil, and natural gas is building up in the atmosphere. Carbon dioxide is a greenhouse gas—it traps heat that would otherwise escape into outer space. Al Gore warns that global warming caused by carbon dioxide emissions could increase sea levels by 20 feet, spin up deadly hurricanes. It could even plunge Europe into an ice age.

Science does not support these and other scary predictions, which Gore and his allies repeatedly tout as a “scientific consensus.” Global warming is real and carbon dioxide emissions are contributing to it, but it is not a crisis. Global warming in the 21 st century is likely to be modest, and the net impacts may well be beneficial in some places. Even in the worst case, humanity will be much better off in 2100 than it is today.

The following is a summary of key points:

Average Annual Heat-Related Mortality: People will not drop like flies from heat waves in a warming world. Heat-related mortality will continue to decline as the world warms.

Far more people die each year from excess cold than from excess heat.

Global warming will not make air pollution worse.

Global warming will not lead to malaria epidemics in Northern Hemisphere countries.

Contrary to Gore, no “strong, new scientific consensus is emerging” that global warming is making hurricanes stronger.

Global Death & Death Rates Due to Extreme Events, 1900-2004: Since the 1920s, death rates related to extreme weather declined by more than 98 percent globally. The impression conveyed by An Inconvenient Truth—that global warming is making the world a more dangerous place—is false.

Gore’s warning that global warming could shut down the Atlantic branch of the oceanic thermohaline circulation (THC) and plunge Europe into an ice age is science fiction.

Gore’s warning that sea levels could rise by 20 feet is science fiction. Sea level rise in the 21 st century is likely to be measured in inches, not in feet.

The world warmed at a rate of 0.17°C per decade since 1978, according to the temperature record compiled by the United Nations Intergovernmental Panel on Climate Change (IPCC). Since most climate models predict that warming will occur at a constant—that is, non-accelerating—rate, it is reasonable to expect that global warming in the 21 st century will be close to the low end of the IPCC’s forecast range, of 1.4°C to 5.8°C.

The actual warming rate may be only half the 0.17°C per decade rate implied in the IPCC temperature record, because the IPCC has not adequately filtered out the warming biases from local factors like urbanization and improper management of monitoring equipment.

A warming near the low end of the IPCC range would produce both benefits—longer growing seasons, more rainfall, fewer cold deaths—and harms—more heat waves, more drought, some acceleration of sea level rise—but nothing resembling catastrophe.

Even in the IPCC high-end warming forecasts, human welfare would improve dramatically over the next 100 years. In the IPCC fossil-fuel-intensive development scenario, per capita GDP in developing countries increases from $875 per year in 1990 to $43,000 per year in 2100—even after taking into account an additional 110 years of global warming. Even in the IPCC worst-case scenario, global warming is not the civilization-ending catastrophe Al Gore purports it to be.

#### Previous temperature spikes disprove the impact

Singer 11 (S. Fred, Robert M. and Craig, PhD physics – Princeton University and professor of environmental science – UVA, consultant – NASA, GAO, DOE, NASA, Carter, PhD paleontology – University of Cambridge, adjunct research professor – Marine Geophysical Laboratory @ James Cook University, and Idso, PhD Geography – ASU, “Climate Change Reconsidered,” 2011 Interim Report of the Nongovernmental Panel on Climate Change)

Research from locations around the world reveal a significant period of elevated air temperatures that immediately preceded the Little Ice Age, during a time that has come to be known as the Little Medieval Warm Period. A discussion of this topic was not included in the 2009 NIPCC report, but we include it here to demonstrate the existence of another set of real-world data that do not support the IPCC‘s claim that temperatures of the past couple of decades have been the warmest of the past one to two millennia. In one of the more intriguing aspects of his study of global climate change over the past three millennia, Loehle (2004) presented a graph of the Sargasso Sea and South African temperature records of Keigwin (1996) and Holmgren et al. (1999, 2001) that reveals the existence of a major spike in surface air temperature that began sometime in the early 1400s. This abrupt and anomalous warming pushed the air temperatures of these two records considerably above their representations of the peak warmth of the twentieth century, after which they fell back to pre-spike levels in the mid-1500s, in harmony with the work of McIntyre and McKitrick (2003), who found a similar period of higher-than-current temperatures in their reanalysis of the data employed by Mann et al. (1998, 1999).

#### No impact to warming

Idso and Idso 11 (Craig D., Founder and Chairman of the Board – Center for the Study of Carbon Dioxide and Global Change, and Sherwood B., President – Center for the Study of Carbon Dioxide and Global Change, “Carbon Dioxide and Earth’s Future Pursuing the Prudent Path,” February, <http://www.co2science.org/education/reports/> prudentpath/prudentpath.pdf)

As presently constituted, earth’s atmosphere contains just slightly less than 400 ppm of the colorless and odorless gas we call carbon dioxide or CO2. That’s only four-hundredths of one percent. Consequently, even if the air's CO2 concentration was tripled, carbon dioxide would still comprise only a little over one tenth of one percent of the air we breathe, which is far less than what wafted through earth’s atmosphere eons ago, when the planet was a virtual garden place. Nevertheless, a small increase in this minuscule amount of CO2 is frequently predicted to produce a suite of dire environmental consequences, including dangerous global warming, catastrophic sea level rise, reduced agricultural output, and the destruction of many natural ecosystems, as well as dramatic increases in extreme weather phenomena, such as droughts, floods and hurricanes. As strange as it may seem, these frightening future scenarios are derived from a single source of information: the ever-evolving computer-driven climate models that presume to reduce the important physical, chemical and biological processes that combine to determine the state of earth’s climate into a set of mathematical equations out of which their forecasts are produced. But do we really know what all of those complex and interacting processes are? And even if we did -- which we don't -- could we correctly reduce them into manageable computer code so as to produce reliable forecasts 50 or 100 years into the future? Some people answer these questions in the affirmative. However, as may be seen in the body of this report, real-world observations fail to confirm essentially all of the alarming predictions of significant increases in the frequency and severity of droughts, floods and hurricanes that climate models suggest should occur in response to a global warming of the magnitude that was experienced by the earth over the past two centuries as it gradually recovered from the much-lower-than-present temperatures characteristic of the depths of the Little Ice Age. And other observations have shown that the rising atmospheric CO2 concentrations associated with the development of the Industrial Revolution have actually been good for the planet, as they have significantly enhanced the plant productivity and vegetative water use efficiency of earth's natural and agro-ecosystems, leading to a significant "greening of the earth." In the pages that follow, we present this oft-neglected evidence via a review of the pertinent scientific literature. In the case of the biospheric benefits of atmospheric CO2 enrichment, we find that with more CO2 in the air, plants grow bigger and better in almost every conceivable way, and that they do it more efficiently, with respect to their utilization of valuable natural resources, and more effectively, in the face of environmental constraints. And when plants benefit, so do all of the animals and people that depend upon them for their sustenance. Likewise, in the case of climate model inadequacies, we reveal their many shortcomings via a comparison of their "doom and gloom" predictions with real-world observations. And this exercise reveals that even though the world has warmed substantially over the past century or more -- at a rate that is claimed by many to have been unprecedented over the past one to two millennia -- this report demonstrates that none of the environmental catastrophes that are predicted by climate alarmists to be produced by such a warming has ever come to pass. And this fact -- that there have been no significant increases in either the frequency or severity of droughts, floods or hurricanes over the past two centuries or more of global warming -- poses an important question. What should be easier to predict: the effects of global warming on extreme weather events or the effects of elevated atmospheric CO2 concentrations on global temperature? The first part of this question should, in principle, be answerable; for it is well defined in terms of the small number of known factors likely to play a role in linking the independent variable (global warming) with the specified weather phenomena (droughts, floods and hurricanes). The latter part of the question, on the other hand, is ill-defined and possibly even unanswerable; for there are many factors -- physical, chemical and biological -- that could well be involved in linking CO2 (or causing it not to be linked) to global temperature. If, then, today's climate models cannot correctly predict what should be relatively easy for them to correctly predict (the effect of global warming on extreme weather events), why should we believe what they say about something infinitely more complex (the effect of a rise in the air’s CO2 content on mean global air temperature)? Clearly, we should pay the models no heed in the matter of future climate -- especially in terms of predictions based on the behavior of a non-meteorological parameter (CO2) -- until they can reproduce the climate of the past, based on the behavior of one of the most basic of all true meteorological parameters (temperature). And even if the models eventually solve this part of the problem, we should still reserve judgment on their forecasts of global warming; for there will yet be a vast gulf between where they will be at that time and where they will have to go to be able to meet the much greater challenge to which they aspire

### 1NC Negative Feedbacks

#### Negative feedbacks check runaway warming -

#### A. Water Vapor

Sweger 11 [Dr. Daniel M. Sweger, AB (Physics, Duke University, 1965) and Ph.D. (Solid State Physics, American University, 1974) has been a research scientist at NIST, where he was active in a variety of research areas, including cryogenic thermometry, solid state and nuclear physics, and molecular spectroscop, “ Earth’s Climate Engine Exploring the Dynamics of Earth’s Climate”, March 17th, 2011, http://junksciencearchive.com/Greenhouse/Earth-s\_Climate\_Engine.pdf, Chetan]

The role of water vapor in determining surface temperatures is ultimately a dominant one. During daylight hours it moderates the sun’s energy, at night it acts like a blanket to slow the loss of heat, and carries energy from the warm parts of the earth to the cold. Compared to that, if carbon dioxide has an effect, it must be negligible. It is also clear from the data presented above that water vapor acts with a negative feedback. The data clearly shows that the relationship between the amount of water vapor in the air and temperature is negative; that is, the higher the amount of water vapor in the atmosphere the lower the surface temperature. In that regard, it almost acts as a thermostat. As the air cools as a result of an increasing moisture content in the atmosphere, there is a decrease in the amount of water vapor produced by evaporation. Eventually this decrease of the level of water vapor being introduced into the atmosphere results in a decrease in moisture content. At this point more sunlight reaches the earth’s surface resulting in higher temperatures and increasing evaporation. In the positive feedback mechanism as proposed by the global warming proponents this behavior would be reversed. Then the data would show a positive relationship between moisture content and temperature. But it does not.

#### B. Sulfate aerosols

Hausfather 8 – Zeke, Regular Contributor to the Yale Forum on Climate Change, June 24th, [“COMMON CLIMATE MISCONCEPTIONS Why Reducing Sulfate Aerosol Emissions Complicates Efforts to Moderate Climate Change” The Yale Forum on Climate Change and the Media, http://yaleclimatemediaforum.org/ccm/0608\_sulphate\_aerosol\_emissions.htm]

With all the attention surrounding carbon dioxide these days, it is easy to forget that there are a number of other important natural and human-driven factors ("forcings" in climate circles) that influence Earth's climate. Among the most important of these are sulfate aerosols, microscopic particles smaller than a millionth of a meter suspended in the air. Sulfate aerosols are produced primarily from sulphur dioxide (SO2) emitted during the combustion of fossil fuels. Along with ozone precursors, they are primary causes of acid rain and of lung irritation and ground-level haze or smog in polluted areas. Sulfate aerosols also have a strong cooling effect on Earth, both through their ability to scatter incoming light and because of their propensity to increase cloud formation and reflectivity. Among the most significant changes in climate change modeling between the 2001 IPCC Third Assessment Report (TAR) and the Fourth Assessment Report (AR4) in 2007 was a revision of the expected trajectory of human-induced sulfate aerosol emissions. In the earlier report, scientists assumed that aerosols would increase in rough proportional to economic growth. The authors of the 2007 report realized that emissions of aerosols, which have direct and immediate negative health effects to those in the area surrounding their emission, will likely be targeted for reductions as countries like China and India become wealthier. This emissions reduction would mirror a similar process that occurred in Europe and the United States. Sulfate aerosols are the most significant substance in a category of aerosols tending to help cool the climate. Aerosols decrease radiative forcing in two ways: through direct aerosol effects as a result of an increased scattering and absorption of incoming solar radiation, and through indirect effects resulting from their ability to serve as cloud condensation nuclei. An increased number of cloud condensation nuclei have a number of different effects: they increase the reflectivity of clouds by making them denser and giving them higher liquid water content, they increase the height of clouds, and they increase cloud lifetime. Figure One, below, shows the major climate forcings over the past 120 years. The major positive forcings include CO2 at 1.66 watts per meter squared (W m-2), methane (CH4) at 0.46 W m-2, nitrous oxide (N2O) at 0.16 W m-2, and various halocarbons (CFCs, HCFCs, etc.) at 0.34 W m-2. Aerosol direct effects account for -0.5 ± 0.4 W m-2 negative forcing, with SO2 comprising -0.4 W m-2. Indirect effects are around -0.7 W m-2, with a large uncertainty range of -1.8 to -0.3 W m-2. Aerosols are the primary reason why Earth is still at around 380 parts per million CO2-equivilent (CO2e), rather than the 460 ppm CO2e projected if all the positive forcings were added together. Conveniently enough, aerosols pretty much cancel out the warming from all the non-CO2 greenhouse gases. 0608\_ccm\_Fig1.jpg - 31186 Bytes Figure One. Radiative forcing of major climate factors over the past 123 years. Figure from Hansen et al 2005. There are a number of different projections for sulfate aerosol emissions over the next century based on assumptions regarding the rate of economic growth, population growth, and technological development. Figure Two, below, shows an aggregation of all models of anthropogenic sulfate emissions used in the most recent IPCC report. Specific scenarios vary widely, but the median value across all models results by the year 2100 in sulfate aerosol emissions of 35 million metric tons, roughly one half of current emissions. 0608\_ccm\_Fig2.jpg - 55341 Bytes Figure Two. Projections of future aerosol emissions for SRES (Special Report on Emissions Scenarios) and post-SRES scenarios. Figure from the third working group of the latest IPCC report. A reduction of anthropogenic SO2 of around 50 percent worldwide over the next century, as projected in the most recent IPCC report, would result in a significant warming effect on the global climate. Sulfates are extremely short-lived particles, and emission reductions would have immediate effects on radiative forcing. A 50 percent reduction in sulfate aerosol emissions would reduce by half their current radiative forcing of -0.83 W m-2. This change in forcings would increase global temperatures by roughly 0.36 degrees C (.64 F) relative to a scenario where aerosol emissions remain constant. Figure three below shows the practical implications of a reduction in aerosols in the next century. If current greenhouse gas concentrations remain constant at current levels, scientists project about 1.34 degrees C (2.41 F) warming relative to pre-industrial temperatures by the end of the century (the world has already warmed 0.74 degrees C (1.33 F) in the past century, and 0.60 degrees C (1.08F) additional warming is in the pipeline as a result of Earth's thermal inertia). A reduction of anthropogenic atmospheric sulfate aerosols by 50 percent means that 1.34 degrees C (2.41 F) warming suddenly becomes 1.70 degrees C (3.06 F). Constant 2005 GHG Concentrations Constant SO2 1.34 degrees C (2.41 F) Reduced SO2 1.70 degrees C (3.06 F) Figure Three. Based on a simple calculation of radiative forcings of the current atmospheric concentration of greenhouse gases at equilibrium, assuming a climate sensitivity of roughly 0.87 degrees K. Also assuming that anthropogenic SO2 represent only 72 percent of total atmospheric SO2 flux and that the indirect aerosol effects of SO2 account for around 62 percent of total indirect aerosol forcing, or -0.43 W m-2

### 2NC Disease – No XTC

#### -- Burn out stops disease

Lederberg 99 (Joshua, Professor of Genetics – Stanford University School of Medicine, Epidemic The World of Infectious Disease, p. 13)

The toll of the fourteenth-century plague, the "Black Death," was closer to one third. If the bugs' potential to develop adaptations that could kill us off were the whole story, we would not be here. However, with very rare exceptions, our microbial adversaries have a **shared interest** in our survival. Almost any pathogen comes to a **dead end** when we die; it first has to communicate itself to another host in order to survive. So historically, the really severe host- pathogen interactions have resulted in a **wipeout** of **both** host and pathogen. We humans are still here because, so far, the pathogens that have attacked us have willy-nilly had an interest in our survival. This is a very delicate balance, and it is easily disturbed, often in the wake of large-scale ecological upsets.

#### No impact

Brooks 12 (Michael, Consultant – New Scientist, “Deep future: Why we'll still be here,” New Scientist, Volume 213, Issue 2854, March, p. 36–37, Science Direct)

We are also unlikely to be extinguished by a killer virus pandemic. The worst pandemics occur when a new strain of flu virus spreads across the globe. In this scenario people have no immunity, leaving large populations exposed. Four such events have occurred in the last 100 years – the worst, the 1918 flu pandemic, killed less than 6 per cent of the world's population. More will come, but disease-led extinctions of an entire species only occur when the population is confined to a small area, such as an island. A severe outbreak will kill many millions but there is no compelling reason to think any future virus mutations will trigger our total demise.

#### -- No extinction

Gladwell 99 (Malcolm, The New Republic, July 17 and 24, 1995, excerpted in Epidemics: Opposing Viewpoints, p. 31-32)

Every infectious agent that has ever plagued humanity has had to adapt a specific strategy but every strategy carries a corresponding cost and this makes human counterattack possible. Malaria is vicious and deadly but it relies on mosquitoes to spread from one human to the next, which means that draining swamps and putting up mosquito netting can all hut halt endemic malaria. Smallpox is extraordinarily durable remaining infectious in the environment for years, but its very durability its essential rigidity is what makes it one of the easiest microbes to create a vaccine against. AIDS is almost invariably lethal because it attacks the body at its point of great vulnerability, that is, the immune system, but the fact that it targets blood cells is what makes it so relatively uninfectious. Viruses are not superhuman. I could go on, but the point is obvious. Any microbe capable of wiping us all out would have to be everything at once: as contagious as flue, as durable as the cold, as lethal as Ebola, as stealthy as HIV and so doggedly resistant to mutation that it would stay deadly over the course of a long epidemic. But viruses are not, well, superhuman. They cannot do everything at once. It is one of the ironies of the analysis of alarmists such as Preston that they are all too willing to point out the limitations of human beings, but they neglect to point out the **limitations** of microscopic life forms.

#### -- Nanotech solves

CRN 7 (Center for Responsible Nanotechnology, “Medical Benefits of Molecular Manufacturing”, CRN Research: Overview of Current Findings, 6-19, http://www.crnano.org/medical.htm)

Overview:  Molecular manufacturing (MM) will impact the practice of medicine in many ways. Medicine is highly complex, so it will take some time for the full benefits to be achieved, but many benefits will occur almost immediately. The tools of medicine will become cheaper and more powerful. Research and diagnosis will be far more efficient, allowing rapid response to new diseases, including engineered diseases. Small, cheap, numerous sensors, computers, and other implantable devices may allow continuous health monitoring and semi-automated treatment. Several new kinds of treatment will become possible. As the practice of medicine becomes cheaper and less uncertain, it can become available to more people.

#### -- No species has ever died from disease

Regis 97 (Ed, Author – “Virus Ground Zero”, “Pathogens of Glory”, New York Times, 5-18, Lexis)

Despite such horrific effects, Dr. Peters is fairly anti-apocalyptic when it comes to the ultimate import of viruses. Challenging the widespread perception that exotic viruses are doomsday agents bent on wiping out the human species, he notes that "we have not documented that viruses have wiped out **any** species." As for the notion that we're surrounded by "new" diseases that never before existed, he claims that "most new diseases turn out to be old diseases"; one type of hantavirus infection, he suggests, goes back to A.D. 960. And in contrast to the popular belief that viral epidemics result from mankind's destruction of the environment, Dr. Peters shows how the elimination of a viral host's habitat can eradicate a killer virus and prevent future epidemics. This is what happened when the Aswan Dam, completed in 1971, destroyed the floodwater habitat of the Aedes aegypti mosquitoes, carriers of Rift Valley fever virus: "After the Aswan Dam was constructed, there was no more alluvial flooding. . . . Without a floodwater mosquito, the virus can't maintain itself over the long haul. . . . By 1980, Rift Valley fever had essentially disappeared in Egypt." Still, Dr. Peters isn't totally averse to doomsday thinking, and in his final chapter he lays out his own fictional disease scenario, in which a mystery virus from Australia suddenly breaks out in a Bangkok slum. Throw in Malthus, chaos theory and the high mutation rates of RNA viruses, and soon he's got the world teetering on the brink of viral holocaust in the finest Hollywood tradition. But he doesn't know quite what to make of his own scenario. He offers "one valid, simplified equation to describe what we can expect from viruses in the future": mutating viruses plus a changing ecology plus increasing human mobility add up to more and worse infectious diseases. Two pages later, though, he says that "it is impossible to gauge how the actions of man will impact on emerging infectious diseases." If that is true, it discredits the very equation he's given us. In the end, he presents no clear or consistent picture of the overall threat posed by the viruses he discusses. The empirical fact of the matter is that today's most glamorous viruses -- Marburg and Ebola -- have killed **minuscule numbers** of people compared with the staggering death rates of pathogens that go back to disease antiquity. Marburg virus, discovered in 1967, has been known to kill just 10 people in its 30-year history; Ebola has killed approximately 800 in the 20 years since it appeared in 1976. By contrast, malaria, an ancient illness, still kills a worldwide average of one million people annually -- more than 2,700 per day. More than three times as many people die of malaria every day than have been killed by Ebola virus in all of history. Yet it's Ebola that people find "scary"!

#### -- Humans will adapt

Gladwell 95 (Malcolm, The New Republic, July 17, Excerpted in Epidemics: Opposing Viewpoints, p. 29)

In Plagues and Peoples, which appeared in 1977. William MeNeill pointed out that…while man’s efforts to “remodel” his environment are sometimes a source of new disease. They are seldom a source of serious epidemic disease. Quite the opposite. As humans and new microorganisms interact, they begin to accommodate each other. Human populations slowly build up resistance to circulating infections. What were once virulent infections, such as syphilis become attenuated. Over time, diseases of adults, such as measles and chicken pox, become limited to children, whose immune systems are still naïve.

#### -- Self-interest means no extinction

MacPhee and Marx 98 (Ross, American Museum of Natural History and Aaron Diamond, AIDS Research Facility and Tulane University, “How Did Hyperdisease Cause Extinctions?”, http://www.amnh.org/science/biodiversity/extinction/Day1/disease/Bit2.html)

It is well known that lethal diseases can have a profound effect on species' population size and structure. However, it is generally accepted that the principal populational effects of disease are acute--that is, short-term. In other words, although a species many suffer substantial loss from the effects of a given highly infectious disease at a given time, the facts indicate that natural populations tend to bounce back after the period of high losses. Thus, disease as a primary cause of extinction seems implausible. However, this is the normal case, where the disease-provoking pathogen and its host have had a long relationship. Ordinarily, it is not in the pathogens interest to rapidly kill off large numbers of individuals in its host species, because that might imperil its own survival. Disease theorists long ago expressed the idea that pathogens tend to evolve toward a "benign" state of affairs with their hosts, which means in practice that they continue to infect, but tend not to kill (or at least not rapidly). A very good reason for suspecting this to be an accurate view of pathogen-host relationships is that individuals with few or no genetic defenses against a particular pathogen will be maintained within the host population, thus ensuring the pathogen's ultimate survival.

### 2NC Environment – Resilient

#### No brink to environmental collapse

Lomborg 12 -- director of the Copenhagen Consensus Center and author of Smart Solutions to Climate Change (Bjorn, July/August, "Environmental Alarmism, Then and Now," http://www.foreignaffairs.com/articles/137681/bjorn-lomborg/environmental-alarmism-then-and-now?page=show)

As for its pollution predictions, The Limits to Growth was simultaneously scary and vague. Pollution's increase was supposed to trigger a global collapse if the decrease of food or resources didn't do so first, but how exactly pollution was defined was left unclear. Individual pollutants, such as DDT, lead, mercury, and pesticides, were mentioned, but how those could kill any significant number of people was unspecified, making it a bit tricky to test the prediction. Air pollution might be considered a good proxy for overall pollution, since it was the biggest environmental killer in the twentieth century and since the Environmental Protection Agency estimates that its regulation produces 86-96 percent of all the social benefits from environmental regulation more generally. In the developing world, outdoor air pollution is indeed rising and killing more people, currently perhaps over 650,000 per year. Indoor air pollution (from using dirty fuels for cooking and heating) kills even more, almost two million per year (although that number has been decreasing slightly).

#### -- Environment is resilient

Easterbrook 95 (Gregg, Distinguished Fellow – Fullbright Foundation, A Moment on Earth, p. 25)

In the aftermath of events such as Love Canal or the Exxon Valdez oil spill, every reference to the environment is prefaced with the adjective "fragile." "Fragile environment" has become a welded phrase of the modern lexicon, like "aging hippie" or "fugitive financier." But the notion of a fragile environment is profoundly wrong. Individual animals, plants, and people are distressingly fragile. The environment that contains them is close to indestructible. The living environment of Earth has survived ice ages; bombardments of cosmic radiation more deadly than atomic fallout; solar radiation more powerful than the worst-case projection for ozone depletion; thousand-year periods of intense volcanism releasing global air pollution far worse than that made by any factory; reversals of the planet's magnetic poles; the rearrangement of continents; transformation of plains into mountain ranges and of seas into plains; fluctuations of ocean currents and the jet stream; 300-foot vacillations in sea levels; shortening and lengthening of the seasons caused by shifts in the planetary axis; collisions of asteroids and comets bearing far more force than man's nuclear arsenals; and the years without summer that followed these impacts. Yet hearts beat on, and petals unfold still. Were the environment fragile it would have expired many eons before the advent of the industrial affronts of the dreaming ape. Human assaults on the environment, though mischievous, are pinpricks compared to forces of the magnitude nature is accustomed to resisting.

### 2NC Environment – Too Late

#### -- Too late – environmental collapse inevitable because of past pollution

Myers 97 (Norman, Visiting Fellow of Green College – Oxford University and Senior Fellow – World Wildlife Fund, Biodiversity II, Ed. Reaka-Kudla and Wilson, p. 135-136)

While formulating our responses to the mass extinction crisis, we need to bear in mind the length of time still available to us. The critical criterion for our efforts is not whether we are doing far more than before, but whether it will be enough—and that in turn raises the question of “enough by when?” How soon might we cross a threshold after which our best efforts could prove to be of little avail? Of course, not all habitats are going to be destroyed outright within the immediate future. But that is hardly the point. What looks set to eliminate many if not most species in the long run will be the “fragmentation effect,” i.e., the break up of extensive habitats into small isolated patches that are too small to maintain their stocks of species into the indefinite future. This phenomenon has been widely analyzed through the theory of island biogeography, and appears to be strongly supported through abundant empirical evidence, albeit with a good number of variations on the general theme. True, the process of ecological equilibriation, with its delayed fall-out effects, will take an extended period to exert its full depletive impact; in some instances, it will be decades and even centuries before species eventually disappear. But the ultimate upshot, which is what we should be primarily concerned with, will be the same. Consider the environmental degradation that already has occurred. Through dynamic inertia, it will continue to exert an increasingly adverse effect for a good way into the future, no matter how vigorously we try to resist the process: much potential damage is already “in the pipeline.” An obvious example is acid rain, which will keep on inflicting injury on biotas by reason of pollutants already deposited though not yet causing apparent harm. Similarly, tropical forests will suffer desiccation through climatic changes induced by deforestation that already has taken place. Desertification will keep on expanding its impact through built-in momentum. Ozone-destroying CFCs now in the atmosphere will continue their work for a whole century even if we were to cease releasing them forthwith. There is enough global warming in store through past emissions of greenhouse gases to cause significant climatic change no matter how much we seek to slow it, let alone halt it. In light of this on-going degradation of the biosphere, let us suppose, for the sake of argument, that in the year 2000 the whole of humankind were to be removed from the face of the Earth in one fell swoop. Because of the many environmental perturbations already imposed, with their impacts persisting for many subsequent decades, gross biospheric impoverishment would continue and thus serve to eliminate further large numbers of species in the long term (Myers, 1990b).

### 2NC Bio-d

#### Bio-D doesn’t matter

Sagoff ’97 (Mark, Senior Research Scholar @ Institute for Philosophy and Public policy in School of Public Affairs @ U. Maryland, William and Mary Law Review, “INSTITUTE OF BILL OF RIGHTS LAW SYMPOSIUM DEFINING TAKINGS: PRIVATE PROPERTY AND THE FUTURE OF GOVERNMENT REGULATION: MUDDLE OR MUDDLE THROUGH? TAKINGS JURISPRUDENCE MEETS THE ENDANGERED SPECIES ACT”, 38 Wm and Mary L. Rev. 825, March, L/N)

Although one may agree with ecologists such as Ehrlich and Raven that the earth stands on the brink of an episode of massive extinction, it may not follow from this grim fact that human beings will suffer as a result. On the contrary, skeptics such as science writer Colin Tudge have challenged biologists to explain why we need more than a tenth of the 10 to 100 million species that grace the earth. Noting that "cultivated systems often out-produce wild systems by 100-fold or more," Tudge declared that "the argument that humans need the variety of other species is, when you think about it, a theological one." n343 Tudge observed that "the elimination of all but a tiny minority of our fellow creatures does not affect the material well-being of humans one iota." n344 This skeptic challenged ecologists to list more than 10,000 species (other than unthreatened microbes) that are essential to ecosystem productivity or functioning. n345 "The human species could survive just as well if 99.9% of our fellow creatures went extinct, provided only that we retained the appropriate 0.1% that we need." n346 [\*906] The monumental Global Biodiversity Assessment ("the Assessment") identified two positions with respect to redundancy of species. "At one extreme is the idea that each species is unique and important, such that its removal or loss will have demonstrable consequences to the functioning of the community or ecosystem." n347 The authors of the Assessment, a panel of eminent ecologists, endorsed this position, saying it is "unlikely that there is much, if any, ecological redundancy in communities over time scales of decades to centuries, the time period over which environmental policy should operate." n348 These eminent ecologists rejected the opposing view, "the notion that species overlap in function to a sufficient degree that removal or loss of a species will be compensated by others, with negligible overall consequences to the community or ecosystem." n349 Other biologists believe, however, that species are so fabulously redundant in the ecological functions they perform that the life-support systems and processes of the planet and ecological processes in general will function perfectly well with fewer of them, certainly fewer than the millions and millions we can expect to remain even if every threatened organism becomes extinct. n350 Even the kind of sparse and miserable world depicted in the movie Blade Runner could provide a "sustainable" context for the human economy as long as people forgot their aesthetic and moral commitment to the glory and beauty of the natural world. n351 The Assessment makes this point. "Although any ecosystem contains hundreds to thousands of species interacting among themselves and their physical environment, the emerging consensus is that the system is driven by a small number of . . . biotic variables on whose interactions the balance of species are, in a sense, carried along." n352 [\*907] To make up your mind on the question of the functional redundancy of species, consider an endangered species of bird, plant, or insect and ask how the ecosystem would fare in its absence. The fact that the creature is endangered suggests an answer: it is already in limbo as far as ecosystem processes are concerned. What crucial ecological services does the black-capped vireo, for example, serve? Are any of the species threatened with extinction necessary to the provision of any ecosystem service on which humans depend? If so, which ones are they? Ecosystems and the species that compose them have changed, dramatically, continually, and totally in virtually every part of the United States. There is little ecological similarity, for example, between New England today and the land where the Pilgrims died. n353 In view of the constant reconfiguration of the biota, one may wonder why Americans have not suffered more as a result of ecological catastrophes. The cast of species in nearly every environment changes constantly-local extinction is commonplace in nature-but the crops still grow. Somehow, it seems, property values keep going up on Martha's Vineyard in spite of the tragic disappearance of the heath hen. One might argue that the sheer number and variety of creatures available to any ecosystem buffers that system against stress. Accordingly, we should be concerned if the "library" of creatures ready, willing, and able to colonize ecosystems gets too small. (Advances in genetic engineering may well permit us to write a large number of additions to that "library.") In the United States as in many other parts of the world, however, the number of species has been increasing dramatically, not decreasing, as a result of human activity. This is because the hordes of exotic species coming into ecosystems in the United States far exceed the number of species that are becoming extinct. Indeed, introductions may outnumber extinctions by more than ten to one, so that the United States is becoming more and more species-rich all the time largely as a result of human action. n354 [\*908] Peter Vitousek and colleagues estimate that over 1000 non-native plants grow in California alone; in Hawaii there are 861; in Florida, 1210. n355 In Florida more than 1000 non-native insects, 23 species of mammals, and about 11 exotic birds have established themselves. n356 Anyone who waters a lawn or hoes a garden knows how many weeds desire to grow there, how many birds and bugs visit the yard, and how many fungi, creepy-crawlies, and other odd life forms show forth when it rains. All belong to nature, from wherever they might hail, but not many homeowners would claim that there are too few of them. Now, not all exotic species provide ecosystem services; indeed, some may be disruptive or have no instrumental value. n357 This also may be true, of course, of native species as well, especially because all exotics are native somewhere. Certain exotic species, however, such as Kentucky blue grass, establish an area's sense of identity and place; others, such as the green crabs showing up around Martha's Vineyard, are nuisances. n358 Consider an analogy [\*909] with human migration. Everyone knows that after a generation or two, immigrants to this country are hard to distinguish from everyone else. The vast majority of Americans did not evolve here, as it were, from hominids; most of us "came over" at one time or another. This is true of many of our fellow species as well, and they may fit in here just as well as we do. It is possible to distinguish exotic species from native ones for a period of time, just as we can distinguish immigrants from native-born Americans, but as the centuries roll by, species, like people, fit into the landscape or the society, changing and often enriching it. Shall we have a rule that a species had to come over on the Mayflower, as so many did, to count as "truly" American? Plainly not. When, then, is the cutoff date? Insofar as we are concerned with the absolute numbers of "rivets" holding ecosystems together, extinction seems not to pose a general problem because a far greater number of kinds of mammals, insects, fish, plants, and other creatures thrive on land and in water in America today than in prelapsarian times. n359 The Ecological Society of America has urged managers to maintain biological diversity as a critical component in strengthening ecosystems against disturbance. n360 Yet as Simon Levin observed, "much of the detail about species composition will be irrelevant in terms of influences on ecosystem properties." n361 [\*910] He added: "For net primary productivity, as is likely to be the case for any system property, biodiversity matters only up to a point; above a certain level, increasing biodiversity is likely to make little difference." n362 What about the use of plants and animals in agriculture? There is no scarcity foreseeable. "Of an estimated 80,000 types of plants [we] know to be edible," a U.S. Department of the Interior document says, "only about 150 are extensively cultivated." n363 About twenty species, not one of which is endangered, provide ninety percent of the food the world takes from plants. n364 Any new food has to take "shelf space" or "market share" from one that is now produced. Corporations also find it difficult to create demand for a new product; for example, people are not inclined to eat paw-paws, even though they are delicious. It is hard enough to get people to eat their broccoli and lima beans. It is harder still to develop consumer demand for new foods. This may be the reason the Kraft Corporation does not prospect in remote places for rare and unusual plants and animals to add to the world's diet. Of the roughly 235,000 flowering plants and 325,000 nonflowering plants (including mosses, lichens, and seaweeds) available, farmers ignore virtually all of them in favor of a very few that are profitable. n365 To be sure, any of the more than 600,000 species of plants could have an application in agriculture, but would they be preferable to the species that are now dominant? Has anyone found any consumer demand for any of these half-million or more plants to replace rice or wheat in the human diet? There are reasons that farmers cultivate rice, wheat, and corn rather than, say, Furbish's lousewort. There are many kinds of louseworts, so named because these weeds were thought to cause lice in sheep. How many does agriculture really require? [\*911] The species on which agriculture relies are domesticated, not naturally occurring; they are developed by artificial not natural selection; they might not be able to survive in the wild. n366 This argument is not intended to deny the religious, aesthetic, cultural, and moral reasons that command us to respect and protect the natural world. These spiritual and ethical values should evoke action, of course, but we should also recognize that they are spiritual and ethical values. We should recognize that ecosystems and all that dwell therein compel our moral respect, our aesthetic appreciation, and our spiritual veneration; we should clearly seek to achieve the goals of the ESA. There is no reason to assume, however, that these goals have anything to do with human well-being or welfare as economists understand that term. These are ethical goals, in other words, not economic ones. Protecting the marsh may be the right thing to do for moral, cultural, and spiritual reasons. We should do it-but someone will have to pay the costs. In the narrow sense of promoting human welfare, protecting nature often represents a net "cost," not a net "benefit." It is largely for moral, not economic, reasons-ethical, not prudential, reasons- that we care about all our fellow creatures. They are valuable as objects of love not as objects of use. What is good for [\*912] the marsh may be good in itself even if it is not, in the economic sense, good for mankind. The most valuable things are quite useless.

#### Really we don't need biodiversity

Child ‘9 (Matthew, Conservation Biologist, “Putting ‘Ecosystem Services’ in Their Place!”, January, <http://www.conservationtoday.org/index.php?/Editorials/Matt-Child/Putting-the-ecosystem-services-argument-in-its-place.html>)

Society can get along just fine without biodiversity. “What?! Are you high? What’s the matter with you?!” I hear you think to yourselves reservedly. But ponder it for a second: even if we were to live in a world in which there was no longer biodiversity but some minimum level of ‘biodeficiency’ (perhaps a few plants and a few sparrows and whatever), technology and human industriousness could plausibly allow us to exist on this Earth for posterity. The advent of scenario planning has helped elucidate this possibility by imagining landscapes covered by ‘technogardens’, complete with control towers that mimic the necessities of the seasons1. In this kind of scenario, ecosystem services are created and controlled by the human endeavour. And ecosystems would be human products, subject to the same industrialisation as the panoply of our packaged lives. Such ‘efficiencies’ of land use would theoretically allow society the luxury of setting aside the remaining land for nature reserves and parks. But would we actually do that? Having finally been convinced that nature is merely utilitarian, ironically by those conservationists whose original intention was to demonstrate the opposite, it’s doubtful whether the public would put up much resistance if the remaining land were annexed by Technogarden Inc. (Whose slogan would probably be: Why leave nature to chance?) There is also no real precedent to believe that governments and industry leaders would stick to a ‘land sparing’ arrangement even if some people did decide that Wilderness (I capitalised to give it a mystical pronoun sort of feel) is invaluable. Take the contemporary example of developing-world agricultural systems: the question is whether to promote ‘wildlife friendly’ farming (a kind of integrated eco-agriculture) or ‘land sparing’ techniques (here: farm; there: nature). Research is beginning to show that land sparing is probably better for biodiversity (Ben Phalan, unpublished data), especially species sensitive to disturbance (which are most of the cool ones). So cordon off pieces of land, farm the living daylights out of it, and then leave the rest for wildlife. Well, yes. However, developing world citizens and their governments probably won’t see it that way. Just ‘leaving’ land alone for nature is anathema to anyone who doesn’t own an iPod. The truth of the matter is that, no matter how we spin it or how many justifications we give for land to be left alone to produce ‘services’, optimisation will only ever lead to optimisation. It’s the eerie way in which we’re wired: the evolutionary residue of our hoarding Pleistocene past interacting with the neon-emblazoned signs and symbols of society urge us to consume ever greater amounts. Such blatant obsession with material wealth only promulgates Thoreau’s dread observation that “fruit is not ripe until turned to dollars”. Inadvertently, the value-laden ecosystem service argument for conservation will only lead to a more impoverished world. Search your feelings: you know this to be true. By reducing nature to dollar signs destined for the cold quarantine of appraisal, we slick the conveyer belts of industrial progress. There is no way we can create a paradigm shift in the consumer conscious if we concede that ecosystems and economics exist on the same scale. The problem is twofold: firstly, if we agree that species can be valued then it can be deduced that most species are not valuable. (That’s pretty catchy, right? Maybe it’ll become a marketing campaign for Technogarden Inc.). The majority of ecosystem services are provided by a core group of species that fulfil basic functional criteria2. And there’s no real naming of names when it comes to species and ‘services’. In practical terms, this means that most species can be substituted and the ‘services’ we so cherish will still be delivered. It also means that rare and endangered species are probably not worth the ‘cost’ of protecting because they fail to effectively (and consistently) produce an anthropocentric service. “But what about keystone species?!” I hear you cry in anguish, “They’re pretty cool and can’t really be substituted!” No, they can’t really. It’d be tricky at the very least. But I’m going to say something controversial right now, brace yourselves: the consequences of losing keystone species exists on a scale below the potential of the human endeavour to engineer solutions. Most species losses have severe ecological repercussions, this much is definitely true. But it’s probably a safe bet that, in reality, very few of these cases would translate into tangible disadvantages for humans. Don’t get me wrong, services like flood abatement, water purification, fibre production and so on are important. But their resilience and quality is mostly determined by sound land management (burning regimes, erosion control, stocking rates), and has little or nothing to do with what most people think of when they hear the word ‘biodiversity’: birds and animals. (The ‘charismatic megafauna’, to give it a buzz phrase spin). Ecosystems services are real and important but most of them can be produced and managed at the producer trophic level. Bird and animal diversity is far more important for sustaining and creating biodiversity (in terms of ensuring ecological relationships and maintaining evolutionary connections). This is an important argument if we recognise and want to convince others of our role as stewards of life. But it is dishonest and ultimately destructive to the conservation movement to try and shove the ‘biodiversity’ concept into what is already a pretty shallow economic framework. Unless we are, of course, speaking about (drum-roll) the greatest hoax of all: “Existence Value”!

#### Impact is small – scientists confirm

Stevens 91 –Journalist for the New York Times

[William K. Stevens, “Species Loss: Crisis or False Alarm,” New York Times. August 20, 1991. http://query.nytimes.com/gst/fullpage.html?res= 9D0CE1D61E3EF933A1575BC0A967958260&sec=&spon=&pagewanted=all] AP

While species constitute a "valuable endowment" and should be protected, there is "a total lack of evidence" of a biological holocaust, said Dr. Julian Simon, a University of Maryland economist. He is perhaps better known for arguing that the world's resources, coupled with human ingenuity, can support a surging population. "We're being asked to take the entire scenario on faith" and on the judgment of those who advance it, he said. The warnings of mass extinction, he said, "seem like guesswork and hysteria." Other dissenters say there is a problem, but that its dimensions simply cannot be known at the moment. No one even knows the true number of species in the world, they say. This is acknowledged by Dr. Wilson and others who share his view. Only 1.4 million species have been identified worldwide, but estimates of South American species alone range from 5 million to 50 million, and estimates of global species range up to 100 million. "When you deal with that kind of error, it's hard to say what's happening," said Dr. Michael A. Mares, a zoologist at the University of Oklahoma who is an expert on neotropical habitats. Likewise, he said, it is difficult to come up with a rate of extinction when the geographical distribution of organisms is not known. "Most of them are invertebrates," he said. "We really don't have a good handle on whether or not they're going extinct and how rapidly. The problem is data right now." More should be known, he said, before the poor countries of the world are asked to make large sacrifices to preserve tropical forests. For his part, Dr. Mares said, he believes that the wolf is not yet at the door. "The wolf is coming," he said, "but he's coming later." It is "understandable that there's disagreement," said Dr. Jared Diamond, an ecologist at the University of California at Los Angeles who has examined the problem. "What people are arguing about is what's going to happen in the future." Predicting the stock market, with its well-known variables and wealth of data, is a far more certain pursuit than predicting the future of species, he said.

#### Environmental catastrophes are hype and lies – statistics go our way

Dutton 01 - professor of philosophy at the University of Canterbury in New Zealand

[Dennis Dutton. “Greener Thank You Think. ‘The Skeptical Environmentalist: Measuring the Real State of the World' by Bjorn Lomborg.” The Washington Post. October 21, 2001. http://www.washingtonpost.com/ac2/wp-dyn?pagename=article&node=&contentId=A12789-2001Oct18]

That the human race faces environmental problems is unquestionable. That environmental experts have regularly tried to scare us out of our wits with doomsday chants is also beyond dispute. In the 1960s overpopulation was going to cause massive worldwide famine around 1980. A decade later we were being told the world would be out of oil by the 1990s. This was an especially chilly prospect, since, as Newsweek reported in 1975, we were in a climatic cooling trend that was going to reduce agricultural outputs for the rest of the century, leading possibly to a new Ice Age. Bjorn Lomborg, a young statistics professor and political scientist at the University of Aarhus in Denmark, knows all about the enduring appeal -- for journalists, politicians and the public -- of environmental doomsday tales, having swallowed more than a few himself. In 1997, Lomborg -- a self-described left-winger and former Greenpeace member -- came across an article in Wired magazine about Julian Simon, a University of Maryland economist. Simon claimed that the "litany" of the Green movement -- its fears about overpopulation, animal species dying by the hour, deforestation -- was hysterical nonsense, and that the quality of life on the planet was radically improving. Lomborg was shocked by this, and he returned to Denmark to set about doing the research that would refute Simon. He and his team of academicians discovered something sobering and cheering: In every one of his claims, Simon was correct. Moreover, Lomborg found on close analysis that the factual foundation on which the environmental doomsayers stood was deeply flawed: exaggeration, prevarications, white lies and even convenient typographical errors had been absorbed unchallenged into the folklore of environmental disaster scenarios.

#### Species loss exaggerated – UN figures prove.

Dutton 01 - professor of philosophy at the University of Canterbury in New Zealand

[Dennis Dutton. “Greener Thank You Think. ‘The Skeptical Environmentalist: Measuring the Real State of the World' by Bjorn Lomborg.” The Washington Post. October 21, 2001. http://www.washingtonpost.com/ac2/wp-dyn?pagename=article&node=&contentId=A12789-2001Oct18]

<For a factual encyclopedia, the book has immense entertainment value, particularly in the way Lomborg traces the urban legends of the Green movement back to their sources. Consider the oft-repeated claim that 40,000 species go extinct every year. Such an annual loss of species, Lomborg points out, would be disaster for the future of life on earth, amounting perhaps to a loss of 25 to 50 percent of all species in the next half century. He manages, however, to locate the source of the story -- an off-hand and completely unfounded guess made by a scientist in 1979. It's been repeated endlessly ever since -- and in 1981 was increased by arch-doomsayer Paul Ehrlich to 250,000 species per year. (Ehrlich also predicted that half the planet's species would be extinct by 2000.) Lomborg brings these unhinged forecasts back down to Earth by reminding us that the only actual scientific documentation for species loss is in United Nations figures, which show an actual loss of between a tenth of a percent and 1 percent of all species for all of the next 50 years. This includes beetles, ants, flies, worms, bacteria and fungi, which make up 99 percent of all species, plus a small but unknown number of mammals and birds. Extinction, Lomborg argues, is a problem to be realistically faced and solved, not a catastrophe to be bewailed. >

#### Redundancy and adaptation solve

Doremus 00 (Holly, Professor of Law – UC Davis, Washington & Lee Law Review, "The Rhetoric and Reality of Nature Protection: Toward a New Discourse," 57 Wash & Lee L. Rev. 11, Winter, Lexis)

Notwithstanding its attractions, the material discourse in general, and the ecological horror story in particular, are not likely to generate policies that will satisfy nature lovers. The ecological horror story implies that there is no reason to protect nature until catastrophe looms. The Ehrlichs' rivet-popper account, for example, presents species simply as the (fungible) hardware holding together the ecosystem. If we could be reasonably certain that a particular rivet was not needed to prevent a crash, the rivet-popper story suggests that we would lose very little by pulling it out. Many environmentalists, though, would disagree. n212 Reluctant to concede such losses, tellers of the ecological horror story highlight how close a catastrophe might be, and how little we know about what actions might trigger one. But the apocalyptic vision is less credible today than it seemed in the 1970s. Although it is clear that the earth is experiencing a mass wave of extinctions, n213 the complete elimination of life on earth **seems unlikely**. n214 Life is remarkably robust. Nor is human extinction probable any time soon. Homo sapiens is adaptable to nearly any environment. Even if the world of the future includes far fewer species, it likely will hold people. n215 One response to this credibility problem tones the story down a bit, arguing not that humans will go extinct but that ecological disruption will bring economies, and consequently civilizations, to their knees. n216 But this too may be overstating the case. Most ecosystem functions are performed by multiple species. This functional **redundancy** means that a **high proportion of species can be lost** without precipitating a collapse. n217

### AT Ocean Acidification

#### No ocean acidification – IPCC uses unrealistic data and animals will adapt

Idso and Idso 11 [Craig D., founder and chairman of the board of the Center for the Study of Carbon Dioxide and Global Change, B.S. in Geography from Arizona State University, his M.S. in Agronomy from the University of Nebraska - Lincoln, and his Ph.D. in Geography from Arizona State University, former Director of Environmental Science at Peabody Energy, faculty researcher in the Office of Climatology at Arizona State University; and Sherwood, President of the Center for the Study of Carbon Dioxide and Global Change, former Research Physicist with the U.S. Department of Agriculture's Agricultural Research Service, Adjunct Professor in the Departments of Geology, Geography, and Botany and Microbiology at ASU, M.S from UMinnesota, receipt of the Arthur S. Flemming Award, "Carbon Dioxide and Earth’s Future," 1-31-11, <http://www.co2science.org/education/reports/prudentpath/prudentpath.pdf>]

The chemistry aspect of the ocean acidification hypothesis is rather straightforward, but it is not as solid as many make it out to be; and a number of respected researchers have published papers demonstrating that the drop in oceanic pH will not be nearly as great as the IPCC and others predict it will be, nor that it will be as harmful as they claim it will be. Consider, for example, the figure below, which shows historical and projected fossil fuel CO2 emissions and atmospheric CO2 concentrations out to the year 2500, as calculated by NOAA’s Pieter Tans (2009). As can be seen there, his analysis indicates that the air’s CO2 concentration will peak well before 2100, and at only 500 ppm compared to the 800 ppm value predicted in one of the IPCC’s scenarios. And it is also worth noting that by the time the year 2500 rolls around, the atmosphere’s CO2 concentration actually drops back down to about what it is today. When these emissions estimates are transformed into reductions of oceanic pH, it can readily be seen in the following figure that Tans’ projected pH change at 2100 is far less than that of the IPCC. And Tans’ analysis indicates a pH recovery to values near those of today by the year 2500, clearly suggesting that things are not the way the world’s climate alarmists make them out to be, especially when it comes to anthropogenic CO2 emissions and their effects on the air’s CO2 content and oceanic pH values. Another reason to not jump on the ocean acidification bandwagon is the fact that, with more CO2 in the air, additional weathering of terrestrial carbonates likely will occur, which would increase delivery of Ca 2+ to the oceans and partially compensate for the CO2induced decrease in calcium carbonate saturation state. And as with all phenomena involving living organisms, the introduction of life into the acidification picture greatly complicates things, as several interrelated biological phenomena must also be considered; and when they are, it becomes much more difficult to draw such sweeping negative conclusions. In fact, as demonstrated in numerous reviews of the scientific literature, these considerations even suggest that the rising CO2 content of earth’s atmosphere may well be a beneficial phenomenon with many positive consequences (Idso, 2009; Idso and Singer, 2009). As an example of this fact, the Center for the Study of Carbon Dioxide and Global Change (hereafter, the Center) maintains an online ocean acidification database that may be accessed free of charge at http://www.co2science.org/data/acidification/acidification.php, showcasing over 1100 experimental results on this topic from the peer-reviewed scientific literature (as of Jan 2011). Specifically, their Ocean Acidification Database is an ever-growing archive of the responses of various growth and developmental parameters of marine organisms immersed in seawater at or near today’s oceanic pH level, as well as at levels lower than that of today. The measured parameters included in the database pertain to changes in calcification, metabolism, growth, fertility and survival; and the data are arranged by marine organism, accessible by selecting an organism’s common or scientific name. In addition, the data have been grouped into similar types of organisms, such as bivalves, corals, fish, nematodes phytoplankton, etc. In considering the experimental results that are archived there, the mean response suggests that ocean acidification may indeed harm some organisms. However, it is critical to note that the vast majority of these experiments were performed under highly unrealistic oceanic pH conditions that will never occur, rendering their findings meaningless in terms of what might possibly happen in the real world. And as one examines the results over the more-likely-to occur pH decline range, a vastly different picture begins to appear. Returning to the Center’s ocean acidification database, consider the figure below, which depicts the percentage changes in all five of the major life characteristics examined in the database (calcification, metabolism, growth, fertility and survival) as functions of the experimentallyorchestrated declines in seawater pH from the present, where each entry in the database is represented by its own individual point. As is clearly evident, the data portray an extremely wide range of pH reduction values, the greatest of which corresponds to an increase in the air’s CO2 concentration in excess of 100,000 ppm, which is orders of magnitude greater than what anyone is expecting will ever occur. Thus, highlighted in grey are all data points that pertain to experiments conducted under pH conditions that are considered to be “far, far beyond the realm of reality.” The low-end boundary of the unrealistic highlighted region of pH reduction shown in the figure is 0.5, which represents the high-end or maximum value of most IPCC-based projections of CO2induced pH reduction, which occurs in the vicinity of AD 2300. Thus, there should be little argument – even from people who think ocean acidification is going to be a problem – in excluding all values beyond a pH decline of 0.5 when considering how acidification of the ocean might realistically affect earth’s marine life. In the next graph to the right, results of all experiments that employed a seawater pH decline that fell somewhere in the stillmore-likely-to-occur range of 0.0 to 0.3 are plotted, where the latter value is the approximate IPCC-derived pH decline in the vicinity of AD 2100. Then, within this range, highlighted in grey, is the much smaller seawater pH reduction range that comes from the work of Tans (2009), who derived a maximum pH decline that could fall anywhere within an uncertainty range of 0.09 to 0.17 by about AD 2100, after which seawater pH begins its longterm recovery. The Tans prediction range has been emphasized in this manner because his analysis is considered to be more realistic than the analysis of the IPCC. Thus, data within the pH reduction range of 0.0 to 0.17 should be considered as being most characteristic of what might possibly occur in the real world, as time marches on and fossil fuel burning continues as per business as usual. And, interestingly enough – and even incorporating pH reduction data all the way out to 0.30 – the linear trend of all the data is actually positive, indicating an overall beneficial response of the totality of the five major life characteristics of marine sea life to ocean acidification, which result is vastly different from the tremendously negative results routinely predicted by the world’s climate alarmists. The next figure illustrates the averages of all responses to seawater acidification for all five of the life characteristics of the various marine organisms (calcification, metabolism, growth, fertility and survival) analyzed over the pH reduction ranges of 0 to 0.09 (from no change to the lower pH edge of the Tans estimate), 0.09 to 0.17 (Tans estimate), and 0.17 to 0.3 (from Tans to the IPCC). The most striking feature of this figure is the great preponderance of data located in positive territory, which suggests that, on the whole, marine organisms likely will not be harmed to any significant degree by the expected decline in oceanic pH. If anything, the results tend to suggest that the world’s marine life may actually slightly benefit from the pH decline. Clearly, the results depicted above suggest something very different from the theoretical model-based predictions of the climate alarmists who claim we are in “the last decades of coral reefs on this planet for at least the next ... million plus years, unless we do something very soon to reduce CO2 emissions,” or who declare that “reefs are starting to crumble and disappear,” that “we may lose those ecosystems within 20 or 30 years,” and that “we’ve got the last decade in which we can do something about this problem.” Such scenarios are simply not supported by the vast bulk of pertinent experimental data. Two other phenomena that suggest the predicted decline in oceanic pH will have little to no lasting negative effects on marine life are the abilities of essentially all forms of life to adapt and evolve. Of those experiments in the database that report the length of time the organisms were subjected to reduced pH levels, for example, the median value was only four days. And many of the experiments were conducted over periods of only a few hours, which is much too short a time for organisms to adapt or evolve to successfully cope with new environmental conditions. And when one allows for such phenomena -- as oceanic pH declines ever-so-slowly in the real world of nature -- the possibility of marine life experiencing a negative response to ocean acidification becomes even less likely (Idso, 2009).

#### No impact—negligible pH change and animal response

NIPCC 10 (Nongovernmental International Panel on Climate Change, multi-national scientific coalition comprised of leading climate scientists, “Speculations beyond the Scope of Reality,” http://www.nipccreport.org/articles/2010/may/05may2010a1.html, AM)

In the introductory material to their paper on potential effects of predicted near-future increases in CO2-driven ocean acidification on shell-producing calcification in a certain species of oyster, Watson et al. (2009) report that over the past two centuries, CO2 emissions from deforestation and the burning of fossil fuels have increased atmospheric CO2 concentrations from 280 to 380 ppm, citing NOAA/ESRL records produced and maintained by Pieter Tans. They additionally say that the portion of this extra CO2 that has been taken up by the planet's oceans has caused a 0.1 unit drop in the pH of their surface waters, which would appear to be correct. However, they predict there will be a further reduction in ocean pH of 0.3 to 0.5 units by 2100, citing the work of Haugan and Drange (1996), Orr et al. (2005) and Caldeira and Wickett (2005), while noting that these predicted changes in ocean pH "are not only greater but far more rapid than any experienced in the last 24 million years," citing Blackford and Gilbert (2007), or "possibly the last 300 million years," citing Caldeira and Wickett (2003). But how likely are such predictions? Consider the findings of Tans himself, who Watson et al. approvingly cite in regard to the CO2 history they mention. In a paper published inOceanography, Tans (2009) concluded that the future trajectory of oceanic pH will likely be significantly different from that suggested by the scientists cited by Watson et al., while at the same time bravely criticizing the IPCC reports that have also accepted the highly inflated acidification predictions of those scientists. Indeed, whereas Watson et al. and the IPCC accept the claims of those who project a decline in pH somewhere in the range of 0.3 to 0.5 between now and the end of the century, Tans' projections yield a pH decline somewhere in the range of 0.09 to 0.17, which is much smaller, and which would be expected to have significantly reduced biological impacts compared to those suggested by the experimental work of Watson et al. for that future point in time. Based on the results of their experiments and the maximum decline in ocean-water pH that they accept, for example, Watson et al. predict a significantdecline of 72% in Sydney rock oyster (Saccostrea glomerata) larval survival by the year 2100. However, utilizing Watson et al.'s data, but with the maximum ocean-water pH decline calculated by Tans, one obtains a non-significant larval survival decline of only 14%, based on interpolation of the graphical results portrayed in Watson et al.'s paper. In like manner, similar assessments of changes in antero-posterior measurement yield asignificant decline of 8.7% using Watson et al.'s assumptions about ocean pH, but a non-significant decline of only 1.8% according to Tans' pH calculations. Corresponding results for dorso-ventral measurement were a significant decline of 7.5% with Watson et al.'s pH values, but a non-significant decline of only 1.5% with Tans' values; while for larval dry mass there was a decline of 50% in Watson et al.'s analysis, but an actualincrease (albeit non-significant) of 6% using Tans' pH analysis. Last of all, for empty shells remaining there was a significant decline of 90% in the Watson et al. study, but a non-significant decline of only 6% when Tans' pH projections were used. In summation, based on their experimental data and the ocean pH projections for the end of the century that are promoted by them and the IPCC, Watson et al. find what they characterize as "a dramatic negative effect on the survival, growth, and shell formation of the early larval stages of the Sydney rock oyster." On the other hand, employing the pH values projected by Tans, there are no statistically significant reductions in any of the five biological parameters measured and evaluated by Watson et al., which is an amazingly benign response to an environmental threat that is being suggested by some to be more serious or extreme than it was at any other time that it may have reared its ugly head over the past 300 million years!

#### Increased CO2 raises pH and expands coral growth rates

Idso 9 [Dr. Craig Idso - 1-12, CO2, Global Warming, and Coral Reefs: Prospects for the Future (<http://www.co2science.org/education/reports/corals/corals.php>)]

But why would anyone believe that the recent calcification decline implies that Porites coral growth “will stop,” and that the end will come “by 2050”? They believe it because certain scientists (such as James Hansen) and politicians (such as Al Gore) imply much the same thing, as even De’ath et al. do. But when they feel compelled to be as correct and as true to their data as possible, such as when writing in Science, the three researchers from the Australian Institute of Marine Science clearly state that “the causes for the Great Barrier Reef-wide decline in coral calcification of massive Porites remain unknown.” And when the causes of the recent decline in coral calcification rate are admitted to be unknown, it seems foolish indeed to predict, not only that the decline will continue, but that it will lead all the way to the demise of the studied coral, and especially at a specified future date, which, we might add, De’ath et al. appropriately do not do in their Science paper. Moving on, a second good reason for not believing that the ongoing rise in the air's CO2 content will lead to reduced oceanic pH and, therefore, lower calcification rates in the world's coral reefs, is that the same phenomenon that powers the twin processes of coral calcification and phytoplanktonic growth (photosynthesis) tends to increase the pH of marine waters (Gnaiger et al., 1978; Santhanam et al., 1994; Brussaard et al., 1996; Lindholm and Nummelin, 1999; Macedo et al., 2001; Hansen, 2002); and this phenomenon has been shown to have the ability to dramatically increase the pH of marine bays, lagoons and tidal pools (Gnaiger et al., 1978; Santhanam, 1994; Macedo et al., 2001; Hansen, 2002) as well as to significantly enhance the surface water pH of areas as large as the North Sea (Brussaard et al., 1996). In one recent example, Middelboe and Hansen (2007) studied the pH of a wave-exposed boulder reef in Aalsgaarde on the northern coast of Zealand, Denmark, and a sheltered shallow-water area in Kildebakkerne in the estuary Roskilde Fjord, Denmark, reporting that, in line with what one would expect if photosynthesis tends to increase surface-water pH, (1) "daytime pH was significantly higher in spring, summer and autumn than in winter at both study sites," often reaching values of 9 or more during peak summer growth periods vs. 8 or less in winter, that (2) "diurnal measurements at the most exposed site showed significantly higher pH during the day than during the night," reaching values that sometimes exceeded 9 during daylight hours but that typically dipped below 8 at night, and (3) that "diurnal variations were largest in the shallow water and decreased with increasing water depth." In addition to their own findings, Middelboe and Hansen cite those of (1) Pearson et al. (1998), who found that pH averaged about 9 during the summer in populations of Fucus vesiculosus in the Baltic Sea, (2) Menendez et al. (2001), who found that maximum pH was 9 to 9.5 in dense floating macroalgae in a brackish coastal lagoon in the Ebro River Delta, and (3) Bjork et al. (2004), who found pH values as high as 9.8 to 10.1 in isolated rock pools in Sweden. Noting that "pH in the sea is usually considered to be stable at around 8 to 8.2," the two Danish researchers thus concluded that "pH is higher in natural shallow-water habitats than previously thought." With each succeeding year, the physical evidence against the CO2-reduced calcification theory continues to grow ever more compelling, while support for the positive view promoted here continues to accumulate. Working in the laboratory, for example, Reynaud et al. (2004) grew nubbins of the branching zooxanthellate scleractinian coral Acropora verweyi in aquariums maintained at 20, 25 and 29°C, while weighing them once a week over a period of four weeks. This exercise revealed that coral calcification rates increased in nearly perfect linear fashion with increasing water temperature, yielding values of 0.06, 0.22 and 0.35% per day at 20, 25 and 29°C, respectively. These data reveal an approximate 480% increase in calcification rate in response to a 9°C increase in water temperature and a 160% increase in response to a 3°C increase in temperature, the latter of which temperature increases is somewhere in the low to midrange of global warming that climate alarmists claim will result from a 300 ppm increase in the air's CO2 concentration; and this positive temperature effect far outweighs the negative effect of rising CO2 concentrations on coral calcification via ocean acidification. Working in the field, or, more correctly, the ocean, Carricart-Ganivet (2004) developed relationships between coral calcification rate and annual average SST based on data collected from colonies of the reef-building coral Montastraea annularis at twelve localities in the Gulf of Mexico and the Caribbean Sea, finding that calcification rate in the Gulf of Mexico increased 0.55 g cm-2 year-1 for each 1°C increase, while in the Caribbean Sea it increased 0.58 g cm-2 year-1 for each 1°C increase. Pooling these data with those of M. annularis and M. faveolata growing to a depth of 10 m at Carrie Bow Cay, Belize, those from reefs at St. Croix in the US Virgin Islands, and those of M. faveolata growing to a depth of 10 m at Curacao, Antilles, Carricart-Ganivet reports he obtained a mean increase in calcification rate of ~0.5 g cm-2 year-1 for each 1°C increase in annual average SST, which is even greater than what was found by Lough and Barnes for Porites corals. In another important study, McNeil et al. (2004) used a coupled atmosphere-ice-ocean carbon cycle model to calculate annual mean SST increases within the world's current coral reef habitat from 1995 to 2100 for increases in the air's CO2 concentration specified by the IPCC's IS92a scenario, after which concomitant changes in coral reef calcification rates were estimated by combining the output of the climate model with empirical relationships between coral calcification rate and (1) aragonite saturation state (the negative CO2 effect) and (2) annual SST (the positive temperature effect). Their choice for the first of these two relationships was that derived by Langdon et al. (2000), which leads to an even greater reduction in calcification than was predicted in the study of Kleypas et al. Their choice for the second relationship was that derived by Lough and Barnes (2000), which leads to an increase in calcification that is only half as large as that derived by Carricart-Ganivet (2004). As a result, it can be appreciated that the net result of the two phenomena was doubly weighted in favor of reduced coral calcification. Nevertheless, McNeil et al. found that the increase in coral reef calcification associated with ocean warming far outweighed the decrease associated with the CO2-induced decrease in aragonite saturate state. In fact, they calculated that coral calcification in 2100 would be 35% higher than what it was in pre-industrial times at the very least. And, of course, they found that the area of coral reef habitat expands in association with the projected ocean warming. Finally, in a study devoted to corals that involves a much longer period of time than all of the others we have discussed, another research team (Crabbe et al., 2006) determined the original growth rates of long-dead Quaternary corals found in limestone deposits of islands in the Wakatobi Marine National Park of Indonesia, after which they compared them to the growth rates of present-day corals of the same genera living in the same area. This work revealed that the Quaternary corals grew “in a comparable environment to modern reefs” -- except, of course, for the air’s CO2 concentration, which is currently higher than it has been at any other time throughout the entire Quaternary, which spans the past 1.8 million years. Most interestingly, therefore, their measurements indicated that the radial growth rates of the modern corals were 31% greater than those of their ancient predecessors in the case of Porites species, and 34% greater in the case of Favites species.

#### Acidification doesn’t hurt ocean life

Idso et al 08 [Research Physicist with the U.S. Department of Agriculture's Agricultural Research Service, Vice President of the Center for the Study of Carbon Dioxide and Global Change with a PhD in Botany, former Director of Environmental Science at Peabody Energy in St. Louis, Missouri and is a member of the American Association for the Advancement of Science, American Geophysical Union, American Meteorological Society, Arizona-Nevada Academy of Sciences, Association of American Geographers, Ecological Society of America, and The Honor Society of Phi Kappa Phi [11-26, CO2 Science, Ocean Acidification and Jellyfish Abundance, Vol. 11, No. 48 (<http://www.co2science.org/articles/V11/N48/EDIT.php>)]

In a paper recently published in Limnology and Oceanography, Richardson and Gibbons (2008) say there has been a drop of 0.1 pH unit in the global ocean since the start of the Industrial Revolution, and that "such acidification of the ocean may make calcification more difficult for calcareous organisms," resulting in the "opening [of] ecological space for non-calcifying species." In line with this thinking, they report that Attrill et al. (2007) have argued that "jellyfish may take advantage of the vacant niches made available by the negative effects of acidification on calcifying plankton," causing jellyfish to become more abundant; and they note that the latter researchers provided some evidence for this effect in the west-central North Sea over the period 1971-1995. Hence, they undertook a study to see if Attrill et al.'s findings (which were claimed to be the first of their kind) could be replicated on a much larger scale. Working with data from a larger portion of the North Sea, as well as throughout most of the much vaster Northeast Atlantic Ocean, Richardson and Gibbons used coelenterate (jellyfish) records from the Continuous Plankton Recorder (CPR) and pH data from the International Council for the Exploration of the Sea (ICES) for the period 1946-2003 to explore the possibility of a relationship between jellyfish abundance and acidic ocean conditions. This work revealed that there were, as they describe it, "no significant relationships between jellyfish abundance and acidic conditions in any of the regions investigated." In harmony with their findings, the two researchers note that "no observed declines in the abundance of calcifiers with lowering pH have yet been reported." In addition, they write that the "larvae of sea urchins form skeletal parts comprising magnesium-bearing calcite, which is 30 times more soluble than calcite without magnesium," and, therefore, that "lower ocean pH should drastically inhibit [our italics] the formation of these soluble calcite precursors." Yet they report "there is no observable negative effect of pH." In fact, they say that echinoderm larvae in the North Sea have actually exhibited "a 10-fold increase [our italics] in recent times," which they say has been "linked predominantly to warming (Kirby et al., 2007)." Likewise, they further note that even in the most recent IPCC report, "there was no empirical evidence reported for the effect of acidification on marine biological systems (Rosenzweig et al., 2007)," in spite of all the concern that has been raised by climate alarmists claiming that such is, or should be, occurring. In light of this body of real-world evidence, or non-evidence, Richardson and Gibbons conclude (rather generously, we might add) that "the role of pH in structuring zooplankton communities in the North Sea and further afield at present is tenuous."

#### Coral species are highly resilient – they can adapt

Idso et al 08 Research Physicist with the U.S. Department of Agriculture's Agricultural Research Service, Vice President of the Center for the Study of Carbon Dioxide and Global Change with a PhD in Botany, former Director of Environmental Science at Peabody Energy in St. Louis, Missouri and is a member of the American Association for the Advancement of Science, American Geophysical Union, American Meteorological Society, Arizona-Nevada Academy of Sciences, Association of American Geographers, Ecological Society of America, and The Honor Society of Phi Kappa Phi [9-24, High-Temperature Tolerance in Corals, Vol. 11, No. 39 (<http://www.co2science.org/articles/V11/N39/EDIT.php>)]

As for the significance of these and other observations, the Australian scientists say that "the range in bleaching tolerances among corals inhabiting different thermal realms suggests that at least some coral symbioses have the ability to adapt to much higher temperatures than they currently experience in the central Great Barrier Reef," citing the work of Coles and Brown (2003) and Riegl (1999, 2002). In addition, they note that "even within reefs there is a significant variability in bleaching susceptibility for many species (Edmunds, 1994; Marshall and Baird, 2000), suggesting some potential for a shift in thermal tolerance based on selective mortality (Glynn et al., 2001; Jimenez et al., 2001) and local population growth alone." Above and beyond that, however, they say that their results additionally suggest "a capacity for acclimatization or adaptation." In concluding their paper, Maynard et al. say "there is emerging evidence of high genetic structure within coral species (Ayre and Hughes, 2004)," which suggests, in their words, that "the capacity for adaptation could be greater than is currently recognized." Indeed, as we note in our Editorial of 20 February 2008, quoting Skelly et al. (2007), "on the basis of the present knowledge of genetic variation in performance traits and species' capacity for evolutionary response, it can be concluded that evolutionary change will often occur concomitantly with changes in climate as well as other environmental changes." Consequently, it can be appreciated that if global warming were to start up again (it has been in abeyance for about the last decade), it need not spell the end for earth's highly adaptable corals.

### 2NC Impact Framing

#### Privilege short-timeframe impacts:

#### A) Intervening actors—the longer the timeframe the more likely other agents are to solve their impact

#### B) Impact access—short timeframe impacts can turn long timeframe ones, but not the other way around—by the time the later event has occurred our shorter timeframe impact will already be irreversible

#### C)Probability—Long timeframes decrease it—the more distant the prediction, the more likely it is to be wrong

**POSNER 2004** (Richard, US Court of Appeals judge and Senior Lecturer at the University of Chicago Law School, Catastrophe: Risk and Response 17)

A compelling reason for not giving a great deal of thought to the remote future is the difficulty, often the impossibility, of making accurate predictions beyond a few years. People in the year 1000 could have had only the vaguest conception of what the world would be like in the year 2004, and we can have only the vaguest conception of what it will be like in the year 3000, let alone the year 1,000,000. We have better predictive methods than people in 1000 did, but on the other had the rate of technological change is higher now than it was then. Lacking the requisite foreknowledge we can’t know what we should be doing now to forestall the disasters that are possible, maybe even likely, on that timescale.

#### D) Conditional probability—short-timeframe risks effectively decrease the probability of long-timeframe ones—we can only die once

**BOSTROM 2011** (Nick, Prof. of Philosophy at Oxford, The Concept of Existential Risk (Draft), http://www.existentialrisk.com/concept.html)

Finally, when considering existential-risk probabilities, we must recognize that one existential catastrophe can preempt another. If a meteor wipes us out next year, the existential risk from future machine superintelligence drops to zero. The sum of all-things-considered probabilities of disjoint (mutually exclusive) existential risks cannot exceed 100%. Yet conditional probabilities of disjoint existential risks (conditional, that is to say, on no other existential disaster occurring preemptively) could well add up to more than 100%. For example, some pessimist might coherently assign an 80% probability to humanity being destroyed by machine superintelligence, and a 70% conditional probability to humanity being destroyed by nanotechnological warfare given that humanity is not destroyed by machine superintelligence. However, if the unconditional (all-things-considered) probability of our being eradicated by superintelligence is 80%, then the unconditional probability of our being eradicated by nanotech war must be no greater than 20%, since we can only be eradicated once.

#### The “any risk” logic would make all decision-making impossible—evaluate probability over magnitude

**MESKILL 2009** (David, professor at Colorado School of Mines and PhD from Harvard, “The "One Percent Doctrine" and Environmental Faith,” Dec 9, http://davidmeskill.blogspot.com/2009/12/one-percent-doctrine-and-environmental.html)

Tom Friedman's piece today in the Times on the environment (http://www.nytimes.com/2009/12/09/opinion/09friedman.html?\_r=1) is one of the flimsiest pieces by a major columnist that I can remember ever reading. He applies Cheney's "one percent doctrine" (which is similar to the environmentalists' "precautionary principle") to the risk of environmental armageddon. But this doctrine is both intellectually incoherent and practically irrelevant. It is intellectually incoherent because it cannot be applied consistently in a world with many potential disaster scenarios. In addition to the global-warming risk, there's also the asteroid-hitting-the-earth risk, the terrorists-with-nuclear-weapons risk (Cheney's original scenario), the super-duper-pandemic risk, etc. Since each of these risks, on the "one percent doctrine," would deserve all of our attention, we cannot address all of them simultaneously. That is, even within the one-percent mentality, we'd have to begin prioritizing, making choices and trade-offs. But why then should we only make these trade-offs between responses to disaster scenarios? Why not also choose between them and other, much more cotidien, things we value? Why treat the unlikely but cataclysmic event as somehow fundamentally different, something that cannot be integrated into all the other calculations we make? And in fact, this is how we behave all the time. We get into our cars in order to buy a cup of coffee, even though there's some chance we will be killed on the way to the coffee shop. We are constantly risking death, if slightly, in order to pursue the things we value

. Any creature that adopted the "precautionary principle" would sit at home - no, not even there, since there is some chance the building might collapse. That creature would neither be able to act, nor not act, since it would nowhere discover perfect safety. Friedman's approach reminds me somehow of Pascal's wager - quasi-religious faith masquerading as rational deliberation (as Hans Albert has pointed out, Pascal's wager itself doesn't add up: there may be a God, in fact, but it may turn out that He dislikes, and even damns, people who believe in him because they've calculated it's in their best interest to do so). As my friend James points out, it's striking how descriptions of the environmental risk always describe the situation as if it were five to midnight. It must be near midnight, since otherwise there would be no need to act. But it can never be five \*past\* midnight, since then acting would be pointless and we might as well party like it was 2099. Many religious movements - for example the early Jesus movement - have exhibited precisely this combination of traits: the looming apocalypse, with the time (just barely) to take action.

#### Extremely low probabilities should count as zero—even if there’s some risk, policy decisions can’t be justified by vanishingly small probabilities

**RESCHER 2003** (Nicholas, Prof of Philosophy at the University of Pittsburgh, Sensible Decisions: Issues of Rational Decision in Personal Choice and Public Policy, p. 49-50)

On this issue there is a systemic disagreement between probabilists working on theory-oriented issues in mathematics or natural science and decision theorists who work on practical decision-oriented issues relating to human affairs. The former takes the line that small number are small numbers and must be taken into account as such—that is, the small quantities they actually are. The latter tend to take the view that small probabilities represent extremely remote prospect and can be written off. (De minimis non curat lex, as the old precept has it: in human affairs there is no need to bother with trifles.) When something is about as probable as a thousand fair dice when tossed a thousand times coming up all sixes, then, so it is held, we can pretty well forget about it as a worthy of concern. As a matter of practical policy, we operate with probabilities on the principle that when x ≤ E, then x = 0. We take the line that in our human dealings in real-life situations a sufficiently remote possibility can—for all sensible purposes—be viewed as being of probability zero. Accordingly, such remote possibilities can simply be dismissed, and the outcomes with which they are associated can accordingly be set aside. And in “the real world” people do in fact seem to be prepared to treat certain probabilities as effectively zero, taking certain sufficiently improbable eventualities as no long representing real possibilities. Here an extremely improbable event is seen as something we can simply write off as being outside the range of appropriate concern, something we can dismiss for all practical purposes. As one writer on insurance puts it: [P]eople…refuse to worry about losses whose probability is below some threshold. Probabilities below the threshold are treated as though they were zero. No doubt, remote-possibility events having such a minute possibility can happen in some sense of the term, but this “can” functions somewhat figuratively—it is no longer seen as something that presents a realistic prospect.

### 2nc- Short

#### Extend the 1NC Starr evidence – it’s from this year which means it cites the most recent scientific models – even a regional nuclear war would create so much smoke that it would block out the Sun, replicating the Ice Age – that combined with radioactive fallout will result in mass extinction

#### Multiple additional warrants –

#### A. Famine, disease and radiation

Choi 11

[Charles Q. Choi – National Geographic News, “Small Nuclear War Could Reverse Global Warming for Years”, February 22nd, 2011, <http://news.nationalgeographic.com/news/2011/02/110223-nuclear-war-winter-global-warming-environment-science-climate-change/>, Chetan]

Even a regional nuclear war could spark "unprecedented" global cooling and reduce rainfall for years, according to U.S. government computer models. Widespread famine and disease would likely follow, experts speculate. During the Cold War a nuclear exchange between superpowers—such as the one feared for years between the United States and the former Soviet Union—was predicted to cause a "nuclear winter." In that scenario hundreds of nuclear explosions spark huge fires, whose smoke, dust, and ash blot out the sun for weeks amid a backdrop of dangerous radiation levels. Much of humanity eventually dies of starvation and disease. Today, with the United States the only standing superpower, nuclear winter is little more than a nightmare. But nuclear war remains a very real threat—for instance, between developing-world nuclear powers, such as India and Pakistan. To see what climate effects such a regional nuclear conflict might have, scientists from NASA and other institutions modeled a war involving a hundred Hiroshima-level bombs, each packing the equivalent of 15,000 tons of TNT—just 0.03 percent of the world's current nuclear arsenal. (See a National Geographic magazine feature on weapons of mass destruction.) The researchers predicted the resulting fires would kick up roughly five million metric tons of black carbon into the upper part of the troposphere, the lowest layer of the Earth's atmosphere. In NASA climate models, this carbon then absorbed solar heat and, like a hot-air balloon, quickly lofted even higher, where the soot would take much longer to clear from the sky. (Related: "'Nuclear Archaeologists' Find World War II Plutonium.") Reversing Global Warming? The global cooling caused by these high carbon clouds wouldn't be as catastrophic as a superpower-versus-superpower nuclear winter, but "the effects would still be regarded as leading to unprecedented climate change," research physical scientist Luke Oman said during a press briefing Friday at a meeting of the American Association for the Advancement of Science in Washington, D.C. Earth is currently in a long-term warming trend. After a regional nuclear war, though, average global temperatures would drop by 2.25 degrees F (1.25 degrees C) for two to three years afterward, the models suggest. At the extreme, the tropics, Europe, Asia, and Alaska would cool by 5.4 to 7.2 degrees F (3 to 4 degrees C), according to the models. Parts of the Arctic and Antarctic would actually warm a bit, due to shifted wind and ocean-circulation patterns, the researchers said. After ten years, average global temperatures would still be 0.9 degree F (0.5 degree C) lower than before the nuclear war, the models predict. (Pictures: "Red Hot" Nuclear-Waste Train Glows in Infrared.) Years Without Summer For a time Earth would likely be a colder, hungrier planet. "Our results suggest that agriculture could be severely impacted, especially in areas that are susceptible to late-spring and early-fall frosts," said Oman, of NASA's Goddard Space Flight Center in Greenbelt, Maryland. "Examples similar to the crop failures and famines experienced following the Mount Tambora eruption in 1815 could be widespread and last several years," he added. That Indonesian volcano ushered in "the year without summer," a time of famines and unrest. (See pictures of the Mount Tambora eruption.) All these changes would also alter circulation patterns in the tropical atmosphere, reducing precipitation by 10 percent globally for one to four years, the scientists said. Even after seven years, global average precipitation would be 5 percent lower than it was before the conflict, according to the model. In addition, researcher Michael Mills, of the National Center for Atmospheric Research in Colorado, found large decreases in the protective ozone layer, leading to much more ultraviolet [uv] radiation reaching Earth's surface and harming the environment and people. "The main message from our work," NASA's Oman said, "would be that even a regional nuclear conflict would have global consequences."

#### B. Agriculture and global cooling

Toon and Robock 10

Toon: chair of the Dept of Atmospheric and Oceanic Sciences and a member of the Laboratory for Atmospheric and Space Physics at the University of Colorado @ Boulder. Robock is a Proff of atmospheric science at Rutgers University in New Brunswick, New Jersey Local Nuclear War, Global Suffering; January 2010; Scientific American Magazine; 8 Page(s), <http://www.sciamdigital.com/index.cfm?fa=Products.ViewIssuePreview&ISSUEID_CHAR=944156A6-237D-9F22-E8E572150DCA8E65&ARTICLEID_CHAR=97CA0A88-237D-9F22-E861FD76EBEE2611>)

Twenty-five years ago international teams of scientists showed that a nuclear war between the U.S. and the Soviet Union could produce a “nuclear winter.” The smoke from vast fires started by bombs dropped on cities and industrial areas would envelop the planet and absorb so much sunlight that the earth’s surface would get cold, dark and dry, killing plants worldwide and eliminating our food supply. Surface temperatures would reach winter values in the summer. International discussion about this prediction, fueled largely by astronomer Carl Sagan, forced the leaders of the two superpowers to confront the possibility that their arms race endangered not just themselves but the entire human race. Countries large and small demanded disarmament. Nuclear winter became an important factor in ending the nuclear arms race. Looking back later, in 2000, former Soviet Union leader Mikhail S. Gorbachev observed, “Models made by Russian and American scientists showed that a nuclear war would result in a nuclear winter that would be extremely destructive to all life on earth; the knowledge of that was a great stimulus to us, to people of honor and morality, to act.” Why discuss this topic now that the cold war has ended? Because as other nations continue to acquire nuclear weapons, smaller, regional nuclear wars could create a similar global catastrophe. New analyses reveal that a conflict between India and Pakistan, for example, in which 100 nuclear bombs were dropped on cities and industrial areas--only 0.4 percent of the world's more than 25,000 warheads--would produce enough smoke to cripple global agriculture. A regional war could cause widespread loss of life even in countries far away from the conflict. Regional War Threatens the World By deploying modern computers and modern climate models, the two of us and our colleagues have shown that not only were the ideas of the 1980s correct but the effects would last for at least 10 years, much longer than previously thought. And by doing calculations that assess decades of time, only now possible with fast, current computers, and by including in our calculations the oceans and the entire atmosphere--also only now possible--we have found that the smoke from even a regional war would be heated and lofted by the sun and remain suspended in the upper atmosphere for years, continuing to block sunlight and to cool the earth. India and Pakistan, which together have more than 100 nuclear weapons, may be the most worrisome adversaries capable of a regional nuclear conflict today. But other countries besides the U.S. and Russia (which have thousands) are well endowed: China, France and the U.K. have hundreds of nuclear warheads; Israel has more than 80, North Korea has about 10 and Iran may well be trying to make its own. In 2004 this situation prompted one of us (Toon) and later Rich Turco of the University of California, Los Angeles, both veterans of the 1980s investigations, to begin evaluating what the global environmental effects of a regional nuclear war would be and to take as our test case an engagement between India and Pakistan. The latest estimates by David Albright of the Institute for Science and International Security and by Robert S. Norris of the Natural Resources Defense Council are that India has 50 to 60 assembled weapons (with enough plutonium for 100) and that Pakistan has 60 weapons. Both countries continue to increase their arsenals. Indian and Pakistani nuclear weapons tests indicate that the yield of the warheads would be similar to the 15-kiloton explosive yield (equivalent to 15,000 tons of TNT) of the bomb the U.S. used on Hiroshima. Toon and Turco, along with Charles Bardeen, now at the National Center for Atmospheric Research, modeled what would happen if 50 Hiroshima-size bombs were dropped across the highest population-density targets in Pakistan and if 50 similar bombs were also dropped across India. Some people maintain that nuclear weapons would be used in only a measured way. But in the wake of chaos, fear and broken communications that would occur once a nuclear war began, we doubt leaders would limit attacks in any rational manner. This likelihood is particularly true for Pakistan, which is small and could be quickly overrun in a conventional conflict. Peter R. Lavoy of the Naval Postgraduate School, for example, has analyzed the ways in which a conflict between India and Pakistan might occur and argues that Pakistan could face a decision to use all its nuclear arsenal quickly before India swamps its military bases with traditional forces. Obviously, we hope the number of nuclear targets in any future war will be zero, but policy makers and voters should know what is possible. Toon and Turco found that more than 20 million people in the two countries could die from the blasts, fires and radioactivity--a horrible slaughter. But the investigators were shocked to discover that a tremendous amount of smoke would be generated, given the megacities in the two countries, assuming each fire would burn the same area that actually did burn in Hiroshima and assuming an amount of burnable material per person based on various studies. They calculated that the 50 bombs exploded in Pakistan would produce three teragrams of smoke, and the 50 bombs hitting India would generate four (one teragram equals a million metric tons). Satellite observations of actual forest fires have shown that smoke can be lofted up through the troposphere (the bottom layer of the atmosphere) and sometimes then into the lower stratosphere (the layer just above, extending to about 30 miles). Toon and Turco also did some "back of the envelope" calculations of the possible climate impact of the smoke should it enter the stratosphere. The large magnitude of such effects made them realize they needed help from a climate modeler. It turned out that one of us (Robock) was already working with Luke Oman, now at the NASA Goddard Space Flight Center, who was finishing his Ph.D. at Rutgers University on the climatic effects of volcanic eruptions, and with Georgiy L. Stenchikov, also at Rutgers and an author of the first Russian work on nuclear winter. They developed a climate model that could be used fairly easily for the nuclear blast calculations. Robock and his colleagues, being conservative, put five teragrams of smoke into their modeled upper troposphere over India and Pakistan on an imaginary May 15. The model calculated how winds would blow the smoke around the world and how the smoke particles would settle out from the atmosphere. The smoke covered all the continents within two weeks. The black, sooty smoke absorbed sunlight, warmed and rose into the stratosphere. Rain never falls there, so the air is never cleansed by precipitation; particles very slowly settle out by falling, with air resisting them. Soot particles are small, with an average diameter of only 0.1 micron (μm), and so drift down very slowly. They also rise during the daytime as they are heated by the sun, repeatedly delaying their elimination. The calculations showed that the smoke would reach far higher into the upper stratosphere than the sulfate particles that are produced by episodic volcanic eruptions. Sulfate particles are transparent and absorb much less sunlight than soot and are also bigger, typically 0.5 μm. The volcanic particles remain airborne for about two years, but smoke from nuclear fires would last a decade. Killing Frosts in Summer The climatic response to the smoke was surprising. Sunlight was immediately reduced, cooling the planet to temperatures lower than any experienced for the past 1,000 years. The global average cooling, of about 1.25 degrees Celsius (2.3 degrees Fahrenheit), lasted for several years, and even after 10 years the temperature was still 0.5 degree C colder than normal. The models also showed a 10 percent reduction in precipitation worldwide. Precipitation, river flow and soil moisture all decreased because blocking sunlight reduces evaporation and weakens the hydrologic cycle. Drought was largely concentrated in the lower latitudes, however, because global cooling would retard the Hadley air circulation pattern in the tropics, which produces a large fraction of global precipitation. In critical areas such as the Asian monsoon regions, rainfall dropped by as much as 40 percent. The cooling might not seem like much, but even a small dip can cause severe consequences. Cooling and diminished sunlight would, for example, shorten growing seasons in the midlatitudes. More insight into the effects of cooling came from analyses of the aftermaths of massive volcanic eruptions. Every once in a while such eruptions produce temporary cooling for a year or two. The largest of the past 500 years, the 1815 Tambora eruption in Indonesia, blotted the sun and produced global cooling of about 0.5 degree C for a year; 1816 became known as "The Year.”

#### C. Researchers confirm this conclusion

Wickersham 10

(University of Missouri adjunct professor of Peace Studies and a member of The Missouri University Nuclear Disarmament Education Team, author book about nuclear disarmament education (Bill, 4/11/10, “Threat of ‘nuclear winter’ remains New START treaty is step in right direction.” <http://www.columbiatribune.com/news/2010/apr/11/threat-of-nuclear-winter-remains/>)

In addressing the environmental consequences of nuclear war, Columbian Steve Starr has written a summary of studies published by the Bulletin of the International Network of Engineers and Scientists Against Proliferation, which concludes: “U.S. researchers have confirmed the scientific validity of the concept of ‘nuclear winter’ and have demonstrated that any conflict which targets even a tiny fraction of the global arsenal will cause catastrophic disruptions of the global climate.” In another statement on his Web site, Starr says: “If 1% of the nuclear weapons now ready for war were detonated in large cities, they would utterly devastate the environment, climate, ecosystems and inhabitants of Earth. A war fought with thousands of strategic nuclear weapons would leave the Earth uninhabitable.”

#### D. Peer review

Starr 9

University of Sydney, 8/2/09, (Stephen Starr and Peter King, , “Nuclear suicide”, Sunday, 02 August 2009, <http://www.sciencealert.com.au/opinions/20090208-19496.html>)

But there is little evidence yet that either the government or the Commission is fully alert to the most momentous truth of the present era: Our best science now predicts that nuclear arsenals are fundamentally incompatible with continued human existence. It is imperative that the message coming from scientists in the US, Russia and elsewhere about the environmental consequences of nuclear war be included in the general debate about the control and abolition of nuclear weapons. Unfortunately, the nuclear weapon states apparently remain oblivious to the climatic, ecological and biological consequences of nuclear war. No "environmental impact statement" has ever been created for the US or Russian nuclear weaponry, which is one of the reasons why there still are 22,000 intact nuclear weapons in their deployed and reserve arsenals. However, new peer-reviewed studies done at several US universities predict the detonation of even a tiny fraction of the global nuclear arsenal will result in major changes in the global climate and massive destruction of the stratospheric ozone layer (which protects the Earth from deadly UV light). Even a "regional" nuclear conflict between India and Pakistan, fought with 100 Hiroshima-size weapons, is predicted to loft five million tons of smoke above cloud level; there it would block about 10 per cent of warming sunlight from reaching the surface of the Northern Hemisphere. This would produce average surface temperatures colder than any experienced for the last 1000 years. The smoke would remain in the stratosphere for more than a decade and seriously impact global climate. It would probably be too cold to grow wheat in Canada for several years; grain exports would likely cease from grain-exporting nations .and global nuclear famine would result, Within a few years, most of the already-hungry human populations could perish, and the populations of any nation dependent upon grain imports would be at risk.

### Risk Frontline

**Any risk of nuclear use should be avoided at all costs – it must be evaluated first because extinction is the inevitable result**

**Kateb 92**

(George, Professor at Princeton, The Inner Ocean: Individualism and Democratic Culture, p. 110-112)

The highest worth of Schell’s book lies in his insistence that we should all contemplate the nuclear situation from the perspective of possible human extinction and be overcome by the obligation no matter what to try to avoid human extinction. Yet as Schell says, human extinction (as well as the extinction of most species in nature) is not the intention of anyone in power. What must be seen is that the absolute end can come about even though no one intends it. “We can do it,” he says, “only if we don’t quite know what we’re doing.” Schell’s work attempts to force on us an acknowledgement that sounds far-fetched and even ludicrous, an acknowledgement that the possibility of extinction is carried by any use of nuclear weapons no matter how limited or how seemingly rational or seemingly morally justified. He himself acknowledges that there is a difference between possibility and certainty. But in a matter that is more than a matter, more than one practical matter in a vast series of practical matters, in the “matter” or extinction, we are obliged to treat a possibility – a genuine possibility – as a certainty. Humanity is not to take any step that contains even the slightest risk of extinction. The doctrine of no-use us based on the possibility of extinction. Schell’s perspective transforms the subject. He takes us away from the arid stretches of strategy and asks us to feel continuously, if we can, and feel keenly if only for an instant now and then, how utterly distinct the nuclear world is. Nuclear discourse must vividly register that distinctiveness. It is of no moral account that extinction may be only a slight possibility. No one can say how great the possibility is, but no one has yet credibly denied that by some sequence or other a particular use of nuclear weapons may lead to human and natural extinction. If it is not impossible it must be treated as certain; the loss signified by extinction nullifies all calculations of probability as it nullifies all calculations of costs and benefits. Abstractly put, the connections between any use of nuclear weapons and human and natural extinction are several. Most obviously, a sizeable exchange of strategic nuclear weapons can, by a chain of events in nature, lead to the earth’s uninhabitability, to “nuclear winter”, or to Schell’s “republic of insects and grass.” But the consideration of extinction cannot rest with the possibility of a sizeable exchange of strategic weapons. It cannot rest with the imperative that a sizeable exchange must not take place. A so-called tactical or “theater” use, or a so-called limited use, is also prohibited absolutely because of the possibility of immediate escalation into a sizable exchange or because, even if there were not an immediate escalation, the possibility of extinction would reside in the precedent for future use set by any use whatever in a world in which more than one power possesses nuclear weapons. Add other consequences; the contagious effect on nonnuclear powers who may feel compelled by a mixture of fear and vanity to try to acquire their own weapons, this increasing the possibility of use by increasing the number of nuclear powers; and the unleashed emotions of indignation, retribution, and revenge which, if not acted on immediately in the form of escalation, can be counted on to seek expression later. Other than full strategic uses are not confined no matter how small the explosive power each would be a cancerous transformation of the world. All nuclear roads lead to the possibility of extinction. It is true by definition, but let us make it explicit: the doctrine of no-use excludes any first or retaliatory or later use, whether sizable or not. No-use is the imperative derived from the possibility of extinction. By containing the possibility of extinction, any use is tantamount to a declaration of war against humanity. It is not merely a war crime or a single crime against humanity. Such a war is waged by the user of nuclear weapons against every human individual as individual present and future, not as citizen of this or that country. It is not only a war against the country that is the target. To respond with nuclear weapons, where possible, only increases the chances of extinction and can never, therefore, be allowed. The use of nuclear weapons establishes the right of any person or group, acting officially or not, violently or not, to try to punish those responsible for the use. The aim of the punishment is to deter later uses and thus to try to reduce the possibility of extinction, if, by chance, the particular use in question did not directly lead to extinction. The form of the punishment cannot be specified. Of course the chaos ensuing from a sizable exchange could make punishment irrelevant. The important point, however, is to see that those who use nuclear weapons are qualitatively worse than criminals, and at the least forfeit their offices.

### A2: First/Limited Strikes or Nuke Primacy

**Even if there is a successful first strike, still causes the impacts**

Starr 10

[Steven Starr, Bulletin of Atomic Scientists, “The climatic consequences of nuclear war”, 3/12/10, <http://www.thebulletin.org/web-edition/op-eds/the-climatic-consequences-of-nuclear-war>]

This isn't a question to be avoided. Recent scientific studies PDF have found that a war fought with the deployed U.S. and Russian nuclear arsenals would leave Earth virtually uninhabitable. In fact, NASA computer models have shown that even a "successful" first strike by Washington or Moscow would inflict catastrophic environmental damage that would make agriculture impossible and cause mass starvation. Similarly, in the January Scientific American, Alan Robock and Brian Toon, the foremost experts on the climatic impact of nuclear war, warn that the environmental consequences of a "regional" nuclear war would cause a global famine that could kill one billion people.

**No way to control effects- leads to the impacts**

**NRDC 01**

[Natural Resources Defense Council. , Exposing the U.S. Nuclear War Plan, June 2001, <http://www.nrdc.org/nuclear/nwarplan.asp>]

With the arms-reduction process at a standstill and the Bush administration pursuing a potentially destabilizing missile defense program, the insight NRDC's nuclear war plans project allows into the SIOP's grim blueprints is timely. The project's report, which presents analyses performed using the nuclear-war simulation tool, details two simulations of nuclear attacks on Russia -- a major "counterforce" attack against Russia's nuclear forces and a "countervalue" attack that uses a minimal arsenal to inflict severe damage on Russian cities. The results are clear. A "precision" attack against Russia's nuclear forces -- with an arsenal of about 1,300 warheads -- would kill 8 to 12 million people and injure millions more, while destroying most of Russia's nuclear weapons. In a "countervalue" attack, the U.S. could kill or injure up to 50 million Russians with a mere 3 percent of its current arsenal of more than 7,000 strategic warheads. There is no such thing as a surgical nuclear strike; nuclear weapons are simply weapons of mass destruction, and their effects are complex, unpredictable, and ultimately uncontrollable.

### 2NC – Generic

Extend 1NC – 1 – Coker outlines 4 different motives for why great power war is still likely - fear, interest, status, and revenge will all make countries go to war – these factors makes countries willing to retaliate for any damage inflicted upon them

Even a conventional war will inadvertently escalate to nuclear weapons

**Roth 7** [professor in IR at Goucher College 7 [Ariel Ilan Roth, “Nuclear Weapons in Neo-Realist Theory”, REFLECTION, EVALUATION, INTEGRATION, International Studies Review, pg 369-384]

Critical, though not explicit, in Waltz is the belief that **a war between nuclear powers will be hard to maintain at the conventional level**. Waltz (Waltz and Sagan 2003:9) allows that **such a sub-nuclear war may be fought but** considers **the risk of it escalating** to the nuclear level with its accompanying certain destruction **as too high for the risk tolerance of most** leaders. The strategic studies literature has played host to this debate for decades. Some, like Snyder (1965), have argued that nuclear weapons are, in a sense, mutually negating, creating what has been called the stability-instability paradox, wherein stability at the nuclear level breeds instability at the conventional level. It is, in this conception, as if two duelists stand with guns loaded and cocked at each other’s heads yet proceed to have their fight with daggers instead (Jervis 1989:19-20). Others, like Barry Posen (1982), have argued that **even though nuclear states may wish to limit their conflict to conventional weapons, actions that occur during wartime can lead to** what he calls “**inadvertent escalation.”** In his “Cold War Turned Hot” example, NATO attacks near Soviet ballistic submarine bases could draw a nuclear response even though the aim of NATO is not to harm the strategically stabilizing Soviet submarine-based missile arsenal (Posen 1982:29-30). Such an interaction would then escalate further as American targets were hit with nuclear weapons and a war that was supposed to be both limited and sub-nuclear is now an apocalyptic doomsday. The prospects for inadvertent escalation are recognized by Jervis (1989:21) as well who comments that “because **escalation can occur although no one wants it to**, mutual second-strike capability does not make the world safe for major provocations and limited wars.” This conclusion leads to the first of Jervis’ (1989:23-24) expected outcomes from what he calls the “nuclear revolution,” namely, that there will be peace among the great powers.

Turn – their argument increases the risk of war – failure to take security threats seriously causes destabilization, uncertainty, and conflict.

**Doran 99** (Charles F. Doran, Andrew W. Mellon Professor of International Relations at Johns Hopkins University's Paul H. Nitze School of Advanced International Studies (SAIS), 1999 (“The Structural Turbulance of International Affairs,” *Survival*, Volume 41, Number 2, Summer, p. 148-149)

One of the characteristics of future major wars is that they will not necessarily look exactly like previous wars. Certainly the results have to be the same in terms of devastation and loss of life; otherwise they cannot be called 'wars'. But major war in fact may not last very long. It may happen very quickly, and, although it may be very intense, it may not involve as many of the major powers – though it probably would involve some of them. What is frightening about this possibility, however, is that, as nuclear weapons proliferate, major wars may take place in areas where they would not previously have been expected: the Middle East for example. These new nuclear powers will possess relatively small nuclear forces for some time. They will still not have deterrent forces approaching second-strike capabilities. The populations and states in the region are relatively concentrated, and there is a history of surprise attack. Much of the proliferation is 'paired' between rivals, and it is very difficult for other states to control this dynamic, either in terms of the possible outbreak of war or in terms of the proliferation process itself. The conclusion, then, is that the probability of major war declines for some states, but increases for others. And it is very difficult to argue that it has disappeared in any significant or reliable or hopeful sense. Moreover, a problem with arguing a position that might be described as utopian is that such arguments have policy implications. It is worrying that as a thesis about the obsolescence of major war becomes more compelling to more people, including presumably governments, the tendency will be to forget about the underlying problem, which is not war per se, but security. And by neglecting the under- lying problem of security, the probability of war perversely increases: as governments fail to provide the kind of defence and security necessary to maintain deterrence, one opens up the possibility of new challenges. In this regard it is worth recalling one of Clauswitz's most important insights: A conqueror is always a lover of peace. He would like to make his entry into our state unopposed. That is the underlying dilemma when one argues that a major war is not likely to occur and, as a consequence, one need not necessarily be so concerned about providing the defences that underlie security itself. History [end page 148] shows that surprise threats emerge and rapid destabilising efforts are made to try to provide that missing defence, and all of this contributes to the spiral of uncertainty that leads in the end to war.

Overarching predictions about the future of international relations are usually wrong – the unpredictable nature of war means that you should err on the side of caution.

**Kagan 99** (Donald Kagan, Hillhouse Professor of History and Classics at Yale University, 1999 (“History Is Full Of Surprises,” *Survival*, Volume 41, Number 2, Summer, p. 142)

But I would go further and would want to say even that very important concession is not sufficient, because the one great truth of history is that there is always one other possibility besides all the ones that you imagine, no matter how clever you are. What usually happens in history is in the category called 'none of the above'. If one examines the predictions made in the area of international relations over the centuries, most of the time, most of the people get it wrong – even the most learned, experienced and intelligent people. Without going into a long dissertation on chaos theory, it suffices that it has generally happened that wars break out in places where they were never imagined and often for reasons that were not to be anticipated.

## 1NR – Politics

### 2nc- Short

#### Extend the 1NC Starr evidence – it’s from this year which means it cites the most recent scientific models – even a regional nuclear war would create so much smoke that it would block out the Sun, replicating the Ice Age – that combined with radioactive fallout will result in mass extinction

#### Multiple additional warrants –

#### A. Famine, disease and radiation

Choi 11

[Charles Q. Choi – National Geographic News, “Small Nuclear War Could Reverse Global Warming for Years”, February 22nd, 2011, <http://news.nationalgeographic.com/news/2011/02/110223-nuclear-war-winter-global-warming-environment-science-climate-change/>, Chetan]

Even a regional nuclear war could spark "unprecedented" global cooling and reduce rainfall for years, according to U.S. government computer models. Widespread famine and disease would likely follow, experts speculate. During the Cold War a nuclear exchange between superpowers—such as the one feared for years between the United States and the former Soviet Union—was predicted to cause a "nuclear winter." In that scenario hundreds of nuclear explosions spark huge fires, whose smoke, dust, and ash blot out the sun for weeks amid a backdrop of dangerous radiation levels. Much of humanity eventually dies of starvation and disease. Today, with the United States the only standing superpower, nuclear winter is little more than a nightmare. But nuclear war remains a very real threat—for instance, between developing-world nuclear powers, such as India and Pakistan. To see what climate effects such a regional nuclear conflict might have, scientists from NASA and other institutions modeled a war involving a hundred Hiroshima-level bombs, each packing the equivalent of 15,000 tons of TNT—just 0.03 percent of the world's current nuclear arsenal. (See a National Geographic magazine feature on weapons of mass destruction.) The researchers predicted the resulting fires would kick up roughly five million metric tons of black carbon into the upper part of the troposphere, the lowest layer of the Earth's atmosphere. In NASA climate models, this carbon then absorbed solar heat and, like a hot-air balloon, quickly lofted even higher, where the soot would take much longer to clear from the sky. (Related: "'Nuclear Archaeologists' Find World War II Plutonium.") Reversing Global Warming? The global cooling caused by these high carbon clouds wouldn't be as catastrophic as a superpower-versus-superpower nuclear winter, but "the effects would still be regarded as leading to unprecedented climate change," research physical scientist Luke Oman said during a press briefing Friday at a meeting of the American Association for the Advancement of Science in Washington, D.C. Earth is currently in a long-term warming trend. After a regional nuclear war, though, average global temperatures would drop by 2.25 degrees F (1.25 degrees C) for two to three years afterward, the models suggest. At the extreme, the tropics, Europe, Asia, and Alaska would cool by 5.4 to 7.2 degrees F (3 to 4 degrees C), according to the models. Parts of the Arctic and Antarctic would actually warm a bit, due to shifted wind and ocean-circulation patterns, the researchers said. After ten years, average global temperatures would still be 0.9 degree F (0.5 degree C) lower than before the nuclear war, the models predict. (Pictures: "Red Hot" Nuclear-Waste Train Glows in Infrared.) Years Without Summer For a time Earth would likely be a colder, hungrier planet. "Our results suggest that agriculture could be severely impacted, especially in areas that are susceptible to late-spring and early-fall frosts," said Oman, of NASA's Goddard Space Flight Center in Greenbelt, Maryland. "Examples similar to the crop failures and famines experienced following the Mount Tambora eruption in 1815 could be widespread and last several years," he added. That Indonesian volcano ushered in "the year without summer," a time of famines and unrest. (See pictures of the Mount Tambora eruption.) All these changes would also alter circulation patterns in the tropical atmosphere, reducing precipitation by 10 percent globally for one to four years, the scientists said. Even after seven years, global average precipitation would be 5 percent lower than it was before the conflict, according to the model. In addition, researcher Michael Mills, of the National Center for Atmospheric Research in Colorado, found large decreases in the protective ozone layer, leading to much more ultraviolet [uv] radiation reaching Earth's surface and harming the environment and people. "The main message from our work," NASA's Oman said, "would be that even a regional nuclear conflict would have global consequences."

#### B. Agriculture and global cooling

Toon and Robock 10

Toon: chair of the Dept of Atmospheric and Oceanic Sciences and a member of the Laboratory for Atmospheric and Space Physics at the University of Colorado @ Boulder. Robock is a Proff of atmospheric science at Rutgers University in New Brunswick, New Jersey Local Nuclear War, Global Suffering; January 2010; Scientific American Magazine; 8 Page(s), <http://www.sciamdigital.com/index.cfm?fa=Products.ViewIssuePreview&ISSUEID_CHAR=944156A6-237D-9F22-E8E572150DCA8E65&ARTICLEID_CHAR=97CA0A88-237D-9F22-E861FD76EBEE2611>)

Twenty-five years ago international teams of scientists showed that a nuclear war between the U.S. and the Soviet Union could produce a “nuclear winter.” The smoke from vast fires started by bombs dropped on cities and industrial areas would envelop the planet and absorb so much sunlight that the earth’s surface would get cold, dark and dry, killing plants worldwide and eliminating our food supply. Surface temperatures would reach winter values in the summer. International discussion about this prediction, fueled largely by astronomer Carl Sagan, forced the leaders of the two superpowers to confront the possibility that their arms race endangered not just themselves but the entire human race. Countries large and small demanded disarmament. Nuclear winter became an important factor in ending the nuclear arms race. Looking back later, in 2000, former Soviet Union leader Mikhail S. Gorbachev observed, “Models made by Russian and American scientists showed that a nuclear war would result in a nuclear winter that would be extremely destructive to all life on earth; the knowledge of that was a great stimulus to us, to people of honor and morality, to act.” Why discuss this topic now that the cold war has ended? Because as other nations continue to acquire nuclear weapons, smaller, regional nuclear wars could create a similar global catastrophe. New analyses reveal that a conflict between India and Pakistan, for example, in which 100 nuclear bombs were dropped on cities and industrial areas--only 0.4 percent of the world's more than 25,000 warheads--would produce enough smoke to cripple global agriculture. A regional war could cause widespread loss of life even in countries far away from the conflict. Regional War Threatens the World By deploying modern computers and modern climate models, the two of us and our colleagues have shown that not only were the ideas of the 1980s correct but the effects would last for at least 10 years, much longer than previously thought. And by doing calculations that assess decades of time, only now possible with fast, current computers, and by including in our calculations the oceans and the entire atmosphere--also only now possible--we have found that the smoke from even a regional war would be heated and lofted by the sun and remain suspended in the upper atmosphere for years, continuing to block sunlight and to cool the earth. India and Pakistan, which together have more than 100 nuclear weapons, may be the most worrisome adversaries capable of a regional nuclear conflict today. But other countries besides the U.S. and Russia (which have thousands) are well endowed: China, France and the U.K. have hundreds of nuclear warheads; Israel has more than 80, North Korea has about 10 and Iran may well be trying to make its own. In 2004 this situation prompted one of us (Toon) and later Rich Turco of the University of California, Los Angeles, both veterans of the 1980s investigations, to begin evaluating what the global environmental effects of a regional nuclear war would be and to take as our test case an engagement between India and Pakistan. The latest estimates by David Albright of the Institute for Science and International Security and by Robert S. Norris of the Natural Resources Defense Council are that India has 50 to 60 assembled weapons (with enough plutonium for 100) and that Pakistan has 60 weapons. Both countries continue to increase their arsenals. Indian and Pakistani nuclear weapons tests indicate that the yield of the warheads would be similar to the 15-kiloton explosive yield (equivalent to 15,000 tons of TNT) of the bomb the U.S. used on Hiroshima. Toon and Turco, along with Charles Bardeen, now at the National Center for Atmospheric Research, modeled what would happen if 50 Hiroshima-size bombs were dropped across the highest population-density targets in Pakistan and if 50 similar bombs were also dropped across India. Some people maintain that nuclear weapons would be used in only a measured way. But in the wake of chaos, fear and broken communications that would occur once a nuclear war began, we doubt leaders would limit attacks in any rational manner. This likelihood is particularly true for Pakistan, which is small and could be quickly overrun in a conventional conflict. Peter R. Lavoy of the Naval Postgraduate School, for example, has analyzed the ways in which a conflict between India and Pakistan might occur and argues that Pakistan could face a decision to use all its nuclear arsenal quickly before India swamps its military bases with traditional forces. Obviously, we hope the number of nuclear targets in any future war will be zero, but policy makers and voters should know what is possible. Toon and Turco found that more than 20 million people in the two countries could die from the blasts, fires and radioactivity--a horrible slaughter. But the investigators were shocked to discover that a tremendous amount of smoke would be generated, given the megacities in the two countries, assuming each fire would burn the same area that actually did burn in Hiroshima and assuming an amount of burnable material per person based on various studies. They calculated that the 50 bombs exploded in Pakistan would produce three teragrams of smoke, and the 50 bombs hitting India would generate four (one teragram equals a million metric tons). Satellite observations of actual forest fires have shown that smoke can be lofted up through the troposphere (the bottom layer of the atmosphere) and sometimes then into the lower stratosphere (the layer just above, extending to about 30 miles). Toon and Turco also did some "back of the envelope" calculations of the possible climate impact of the smoke should it enter the stratosphere. The large magnitude of such effects made them realize they needed help from a climate modeler. It turned out that one of us (Robock) was already working with Luke Oman, now at the NASA Goddard Space Flight Center, who was finishing his Ph.D. at Rutgers University on the climatic effects of volcanic eruptions, and with Georgiy L. Stenchikov, also at Rutgers and an author of the first Russian work on nuclear winter. They developed a climate model that could be used fairly easily for the nuclear blast calculations. Robock and his colleagues, being conservative, put five teragrams of smoke into their modeled upper troposphere over India and Pakistan on an imaginary May 15. The model calculated how winds would blow the smoke around the world and how the smoke particles would settle out from the atmosphere. The smoke covered all the continents within two weeks. The black, sooty smoke absorbed sunlight, warmed and rose into the stratosphere. Rain never falls there, so the air is never cleansed by precipitation; particles very slowly settle out by falling, with air resisting them. Soot particles are small, with an average diameter of only 0.1 micron (μm), and so drift down very slowly. They also rise during the daytime as they are heated by the sun, repeatedly delaying their elimination. The calculations showed that the smoke would reach far higher into the upper stratosphere than the sulfate particles that are produced by episodic volcanic eruptions. Sulfate particles are transparent and absorb much less sunlight than soot and are also bigger, typically 0.5 μm. The volcanic particles remain airborne for about two years, but smoke from nuclear fires would last a decade. Killing Frosts in Summer The climatic response to the smoke was surprising. Sunlight was immediately reduced, cooling the planet to temperatures lower than any experienced for the past 1,000 years. The global average cooling, of about 1.25 degrees Celsius (2.3 degrees Fahrenheit), lasted for several years, and even after 10 years the temperature was still 0.5 degree C colder than normal. The models also showed a 10 percent reduction in precipitation worldwide. Precipitation, river flow and soil moisture all decreased because blocking sunlight reduces evaporation and weakens the hydrologic cycle. Drought was largely concentrated in the lower latitudes, however, because global cooling would retard the Hadley air circulation pattern in the tropics, which produces a large fraction of global precipitation. In critical areas such as the Asian monsoon regions, rainfall dropped by as much as 40 percent. The cooling might not seem like much, but even a small dip can cause severe consequences. Cooling and diminished sunlight would, for example, shorten growing seasons in the midlatitudes. More insight into the effects of cooling came from analyses of the aftermaths of massive volcanic eruptions. Every once in a while such eruptions produce temporary cooling for a year or two. The largest of the past 500 years, the 1815 Tambora eruption in Indonesia, blotted the sun and produced global cooling of about 0.5 degree C for a year; 1816 became known as "The Year.”

#### C. Researchers confirm this conclusion

Wickersham 10

(University of Missouri adjunct professor of Peace Studies and a member of The Missouri University Nuclear Disarmament Education Team, author book about nuclear disarmament education (Bill, 4/11/10, “Threat of ‘nuclear winter’ remains New START treaty is step in right direction.” <http://www.columbiatribune.com/news/2010/apr/11/threat-of-nuclear-winter-remains/>)

In addressing the environmental consequences of nuclear war, Columbian Steve Starr has written a summary of studies published by the Bulletin of the International Network of Engineers and Scientists Against Proliferation, which concludes: “U.S. researchers have confirmed the scientific validity of the concept of ‘nuclear winter’ and have demonstrated that any conflict which targets even a tiny fraction of the global arsenal will cause catastrophic disruptions of the global climate.” In another statement on his Web site, Starr says: “If 1% of the nuclear weapons now ready for war were detonated in large cities, they would utterly devastate the environment, climate, ecosystems and inhabitants of Earth. A war fought with thousands of strategic nuclear weapons would leave the Earth uninhabitable.”

### A2: First/Limited Strikes or Nuke Primacy

**Even if there is a successful first strike, still causes the impacts**

Starr 10

[Steven Starr, Bulletin of Atomic Scientists, “The climatic consequences of nuclear war”, 3/12/10, <http://www.thebulletin.org/web-edition/op-eds/the-climatic-consequences-of-nuclear-war>]

This isn't a question to be avoided. Recent scientific studies PDF have found that a war fought with the deployed U.S. and Russian nuclear arsenals would leave Earth virtually uninhabitable. In fact, NASA computer models have shown that even a "successful" first strike by Washington or Moscow would inflict catastrophic environmental damage that would make agriculture impossible and cause mass starvation. Similarly, in the January Scientific American, Alan Robock and Brian Toon, the foremost experts on the climatic impact of nuclear war, warn that the environmental consequences of a "regional" nuclear war would cause a global famine that could kill one billion people.

**No way to control effects- leads to the impacts**

**NRDC 01**

[Natural Resources Defense Council. , Exposing the U.S. Nuclear War Plan, June 2001, <http://www.nrdc.org/nuclear/nwarplan.asp>]

With the arms-reduction process at a standstill and the Bush administration pursuing a potentially destabilizing missile defense program, the insight NRDC's nuclear war plans project allows into the SIOP's grim blueprints is timely. The project's report, which presents analyses performed using the nuclear-war simulation tool, details two simulations of nuclear attacks on Russia -- a major "counterforce" attack against Russia's nuclear forces and a "countervalue" attack that uses a minimal arsenal to inflict severe damage on Russian cities. The results are clear. A "precision" attack against Russia's nuclear forces -- with an arsenal of about 1,300 warheads -- would kill 8 to 12 million people and injure millions more, while destroying most of Russia's nuclear weapons. In a "countervalue" attack, the U.S. could kill or injure up to 50 million Russians with a mere 3 percent of its current arsenal of more than 7,000 strategic warheads. There is no such thing as a surgical nuclear strike; nuclear weapons are simply weapons of mass destruction, and their effects are complex, unpredictable, and ultimately uncontrollable.

### Impact 2NC

#### DA outweighs the case ---

### Turns Case

#### **Also says india relations- solves warming**

Scherr 9 (Jacob Sherr, “Director, Global Strategy & Advocacy” at NRDC (National Resources Defense Council) and Bidisha Banerjee, Cameron Speth Fellow, NRDC, “Greening U.S-India Relations”, <http://switchboard.nrdc.org/blogs/jscherr/greening_usindia_relations.html>, July 16, 2009)

Yesterday Hillary Clinton discussed her upcoming trip to India at the Council on Foreign Relations, noting that "external affairs minister Krishna Nai will lay out a broad-based agenda that calls for a whole of government approach to our bilateral relationship." [and] Meera Shankar, the Indian ambassador to the U.S., also recently spoke about the transformation in Indo-U.S. relations. As we observed last month, Hillary is calling for a "dramatic expansion in our common agenda." Because climate change is one of the gravest threats to security of both our nations, cooperation on climate and clean energy should be a central element of this new approach. Clinton said she will be accompanied by Todd Stern, Special Envoy for Climate Change. She plans to visit a LEED-certified building in India, which she called "a perfect example of what India would be capable of doing" to achieve "win-win approaches" to climate change. The Secretary of State is right - and India is already making important strides on climate solutions. India's first LEED Platinum building, the CII-Sohrabhji Green Business Center, was built in Hyderabad in 2003. It was a public-private partnership that included technical assistance from the U.S. Agency for International Development ("USAID"). Most likely, she will visit one of the two LEED Platinum buildings in Gurgaon, near Delhi (Wipro and ITC Green Centre). India has at least fifteen LEED certified buildings, with plans for 1000 buildings by 2012. USAID involvement in kick-starting modern green building in India is a terrific example of the potential for a much higher level of Indo-U.S. green collaboration on climate and clean energy. What other opportunities exist? Our initial recommendations are contained in a letter Peter Lehner, our Executive Director, sent earlier this week to Secretary Clinton. Peter first points out why India has a critical role to play in addressing climate change and outlines what India is already doing to address greenhouse gas emissions: "Currently, India [it] has the second-fastest growing economy in the world, and is the world's fourth-largest emitter of greenhouse gases. Yet, more than 400 million Indians lack access to electricity. The middle-class is projected to grow from 50 million today to over 500 million by 2025. Energy consumption and greenhouse gas emissions could skyrocket. Between 1990 and 2005 India's carbon dioxide emissions grew by 65 percent, and they are projected to increase by 70 percent by 2020 under a business-as-usual scenario. At the same time, it is important to recognize that India is already taking significant domestic measures to constrain its emissions. Last year, Prime Minister Manmohan Singh released The National Action Plan on Climate Change, outlining eight core national missions through 2017. For example, the plan sets an ambitious target of 200,000 MW of installed solar capacity by mid-century - which would make India a world leader in solar power. Similarly, India's Bureau of Energy Efficiency has adopted policies including an Energy Conservation Building Code that will reduce India's greenhouse gas emissions 20 percent by 2021 as compared to a business-as-usual trajectory. With support from the US Agency for International Development, the Indian government has launched programs that improve energy efficiency in existing buildings and new municipal buildings. The Asia Pacific Partnership on Clean Development and Climate has also implemented innovative projects in India such as demand side management and renewable energy entrepreneurship. State governments have also taken significant steps, such as Himachal Pradesh and Haryana's programs to distribute free compact fluorescent lights to their residents... Business associations and civil society organizations are also actively encouraging a lower-carbon future in India. The Confederation of Indian Industries (CII) has issued a report, "Building a Low-Carbon Indian Economy," which recommends implementation of domestic measures that would reduce India's greenhouse gas emissions 27 percent below business-as-usual projections by 2030. CII's Green Building Centre was also the first LEED platinum building outside of the US and continues to promote advancements in green building materials. The Energy and Resources Institute (TERI) recently launched Light Up a Billion Lives, a village-based solar lantern program for alternative lighting. The non-profit Development Alternatives promotes innovative biofuels projects to provide electricity to villages. Overall clean energy investment in India increased to $3.7 billion in 2008 with a 12 percent growth from 2007. These sustainable energy investments will also provide more reliable energy services for multinational information technology companies operating in India....." Peter then lists the following opportunities for collaboration that hopefully will be discussed during the Secretary's visit: Support policy and technical collaboration for key missions identified in India's National Action Plan on Climate Change. The key missions include: solar energy power generation; enhanced energy efficiency for all sectors and promoting demand side management; energy efficient urban planning focused on public transportation; water efficiency projects; Himalayan ecosystem protection; sustainable agriculture; and strategic knowledge regarding climate change. Expand and intensify US-India energy dialogue. Currently, the US-India renewable energy working group has met only once. Expanded discussions on energy efficiency, demand side management, and cleaner sources of energy are critical to building a sustainable energy future. Renew and increase funding for USAID's Energy Conservation and Commercialization (ECO-III) program. Through ECO-III many successful energy efficiency projects have been launched in India, including registered LEED green buildings and state implementation programs of the Energy Conservation Building Code. Although funding for the ECO-III program has been considerably reduced, renewed investment in ECO-III and/or successor programs are essential to promote low-carbon growth and international technology and funding transfers. Address energy poverty through deployment of energy efficiency and renewable technology. Black carbon, a component of soot emitted by wood-burning cook stoves and diesel fuel, is a major contributor to climate change globally and constitutes a substantial portion of India's global warming pollution. The wood-diesel fuel mix also drives deforestation and results in severe air pollution, especially for the rural and urban poor. Similarly, these at risk populations are disproportionately affected by both water and energy shortages resulting from inefficient supply systems. Programs such as USAID's water/energy projects should be expanded and include efforts to reduce black carbon, a low-hanging fruit mitigation measure. Cooperate with India to build its climate change institutional capacity. The US should begin now to help build institutional capacity in India to utilize effectively anticipated increases in technology transfer and international financing for climate change mitigation and adaption after the Copenhagen conference. There is an identifiable need to assist the development of measurable baseline emissions and the impact upon emissions from policy measures in India. There is also need for greater cooperation on developing innovative technologies, such as integrated photovoltaic systems, ground source heat pumps, indirect/direct evaporated cooling, and energy efficient data centers. In addition, increased cooperation on science and policy focused on climate health and adaptation to climate impacts are needed given that India's poor are anticipated to be among the hardest hit by projected global warming effects. For example, the US Geological Survey is a leader in mapping and monitoring water scarce resources and could share expertise with Indian hydrologists to identify populations vulnerable to climate change impacts. The letter concludes with the hope "for a transformation of US-India cooperation on climate and clean energy" which will put us on a "path to safer, healthier world."

### AT: No Indo/Pak War

### Cyberterror 2NC

#### Immigration reform generates an effective base of IT experts.

**McLarty 9** (Thomas F. III, President – McLarty Associates and Former White House Chief of Staff and Task Force Co-Chair, “U.S. Immigration Policy: Report of a CFR-Sponsored Independent Task Force”, 7-8, http://www.cfr.org/ publication/19759/us\_immigration\_policy.html)

We have seen, when you look at the table of the top 20 firms that are H1-B visa requestors, at least 15 of those are IT firms. And as we're seeing across industry, much of the hardware and software that's used in this country is not only manufactured now overseas, but it's developed overseas by scientists and engineers who were educated here in the United States. We're seeing a lot more activity around cyber-security, certainly noteworthy attacks here very recently. It's becoming an increasingly dominant set of requirements across not only to the Department of Defense, but the Department of Homeland Security and the critical infrastructure that's held in private hands. Was there any discussion or any interest from DOD or DHS as you undertook this review on the security things about what can be done to try to generate a more effective group of IT experts here in the United States, many of which are coming to the U.S. institutions, academic institutions from overseas and often returning back? This potentially puts us at a competitive disadvantage going forward. MCLARTY: Yes. And I think your question largely is the answer as well. I mean, clearly we have less talented students here studying -- or put another way, more talented students studying in other countries that are gifted, talented, really have a tremendous ability to develop these kind of technology and scientific advances, we're going to be put at an increasingly disadvantage. Where if they come here -- and I kind of like Dr. Land's approach of the green card being handed to them or carefully put in their billfold or purse as they graduate -- then, obviously, that's going to strengthen, I think, our system, our security needs.

#### That deters and solves the impact to cyberattacks

**Saydjari 8** (O. Sami, Cyber Defense Agency, LLC, “Structuring for Strategic Cyber Defense: A Cyber Manhattan Project Blueprint”, 2008 Annual Computer Security Applications Conference, http://www.acsac.org/2008/program /keynotes/saydjari.pdf)

As a step toward a security research plan that includes such capabilities, we should identify endstates— goals in terms of how we want our systems to ideally operate. This fresh perspective includes the overall strategic picture and connects clearly with strategic actions that significantly mitigate strategic vulnerabilities. If, for example, the nation has a capability to quickly recover its critical information infrastructure, then the end-state is that strategic attack damages are mitigated and critical services are restored quickly, possibly deterring adversaries from attempting a future attack. Desired End-States. The National Cyber Defense Initiative (NCDI) Opening Moves Workshop [4] identified important end-states, the outcome of a 10- year research effort to create critical capabilities. The following end-states appear in the workshop proceedings: --Continuity of Critical Information Infrastructure Operations. Create technology that would be the basis for a resilient US cyber infrastructure that would sustain critical functions in the face of attacks, including those that could be affected by determined adversaries. --Well-Defended Critical Assets. Make it economically prohibitive for an adversary to cause strategic damage to critical US infrastructures. Currently, adversaries can attack critical systems without investing substantial resources.

#### External from their no war args- causes extinction

**Fritz 9** (Jason, BS – St. Cloud, “Hacking Nuclear Command and Control”, Study Commissioned on Nuclear Non-Proliferation and Disarmament, July, www.icnnd.org/Documents/Jason\_Fritz\_Hacking\_NC2.doc)  
*Direct control of launch*   
The US uses the two-man rule to achieve a higher level of security in nuclear affairs. Under this rule two authorized personnel must be present and in agreement during critical stages of nuclear command and control. The President must jointly issue a launch order with the Secretary of Defense; Minuteman missile operators must agree that the launch order is valid; and on a submarine, both the commanding officer and executive officer must agree that the order to launch is valid. In the US, in order to execute a nuclear launch, an Emergency Action Message (EAM) is needed. This is a preformatted message that directs nuclear forces to execute a specific attack. The contents of an EAM change daily and consist of a complex code read by a human voice. Regular monitoring by shortwave listeners and videos posted to YouTube provide insight into how these work. These are issued from the NMCC, or in the event of destruction, from the designated hierarchy of command and control centres. Once a command centre has confirmed the EAM, using the two-man rule, the Permissive Action Link (PAL) codes are entered to arm the weapons and the message is sent out. These messages are sent in digital format via the secure Automatic Digital Network and then relayed to aircraft via single-sideband radio transmitters of the High Frequency Global Communications System, and, at least in the past, sent to nuclear capable submarines via Very Low Frequency (Greenemeier 2008, Hardisty 1985). The technical details of VLF submarine communication methods can be found online, including PC-based VLF reception. Some reports have noted a Pentagon review, which showed a potential “electronic back door into the US Navy’s system for broadcasting nuclear launch orders to Trident submarines” (Peterson 2004). The investigation showed that cyber terrorists could potentially infiltrate this network and insert false orders for launch. The investigation led to “elaborate new instructions for validating launch orders” (Blair 2003). Adding further to the concern of cyber terrorists seizing control over submarine launched nuclear missiles; The Royal Navy announced in 2008 that it would be installing a Microsoft Windows operating system on its nuclear submarines (Page 2008). The choice of operating system, apparently based on Windows XP, is not as alarming as the advertising of such a system is. This may attract hackers and narrow the necessary reconnaissance to learning its details and potential exploits. It is unlikely that the operating system would play a direct role in the signal to launch, although this is far from certain. Knowledge of the operating system may lead to the insertion of malicious code, which could be used to gain accelerating privileges, tracking, valuable information, and deception that could subsequently be used to initiate a launch. Remember from Chapter 2 that the UK’s nuclear submarines have the authority to launch if they believe the central command has been destroyed. Attempts by cyber terrorists to create the illusion of a decapitating strike could also be used to engage fail-deadly systems. Open source knowledge is scarce as to whether Russia continues to operate such a system. However evidence suggests that they have in the past. Perimetr, also known as Dead Hand, was an automated system set to launch a mass scale nuclear attack in the event of a decapitation strike against Soviet leadership and military. In a crisis, military officials would send a coded message to the bunkers, switching on the dead hand. If nearby ground-level sensors detected a nuclear attack on Moscow, and if a break was detected in communications links with top military commanders, the system would send low-frequency signals over underground antennas to special rockets. Flying high over missile fields and other military sites, these rockets in turn would broadcast attack orders to missiles, bombers and, via radio relays, submarines at sea. Contrary to some Western beliefs, Dr. Blair says, many of Russia's nuclear-armed missiles in underground silos and on mobile launchers can be fired automatically. (Broad 1993) Assuming such a system is still active, cyber terrorists would need to create a crisis situation in order to activate Perimetr, and then fool it into believing a decapitating strike had taken place. While this is not an easy task, the information age makes it easier. Cyber reconnaissance could help locate the machine and learn its inner workings. This could be done by targeting the computers high of level official’s—anyone who has reportedly worked on such a project, or individuals involved in military operations at underground facilities, such as those reported to be located at Yamantau and Kosvinksy mountains in the central southern Urals (Rosenbaum 2007, Blair 2008) Indirect Control of Launch Cyber terrorists could cause incorrect information to be transmitted, received, or displayed at nuclear command and control centres, or shut down these centres’ computer networks completely. In 1995, a Norwegian scientific sounding rocket was mistaken by Russian early warning systems as a nuclear missile launched from a US submarine. A radar operator used Krokus to notify a general on duty who decided to alert the highest levels. Kavkaz was implemented, all three chegets activated, and the countdown for a nuclear decision began. It took eight minutes before the missile was properly identified—a considerable amount of time considering the speed with which a nuclear response must be decided upon (Aftergood 2000). Creating a false signal in these early warning systems would be relatively easy using computer network operations. The real difficulty would be gaining access to these systems as they are most likely on a closed network. However, if they are transmitting wirelessly, that may provide an entry point, and information gained through the internet may reveal the details, such as passwords and software, for gaining entrance to the closed network. If access was obtained, a false alarm could be followed by something like a DDoS attack, so the operators believe an attack may be imminent, yet they can no longer verify it. This could add pressure to the decision making process, and if coordinated precisely, could appear as a first round EMP burst. Terrorist groups could also attempt to launch a non-nuclear missile, such as the one used by Norway, in an attempt to fool the system. The number of states who possess such technology is far greater than the number of states who possess nuclear weapons. Obtaining them would be considerably easier, especially when enhancing operations through computer network operations. Combining traditional terrorist methods with cyber techniques opens opportunities neither could accomplish on their own. For example, radar stations might be more vulnerable to a computer attack, while satellites are more vulnerable to jamming from a laser beam, thus together they deny dual phenomenology. Mapping communications networks through cyber reconnaissance may expose weaknesses, and automated scanning devices created by more experienced hackers can be readily found on the internet. Intercepting or spoofing communications is a highly complex science. These systems are designed to protect against the world’s most powerful and well funded militaries. Yet, there are recurring gaffes, and the very nature of asymmetric warfare is to bypass complexities by finding simple loopholes. For example, commercially available software for voice-morphing could be used to capture voice commands within the command and control structure, cut these sound bytes into phonemes, and splice it back together in order to issue false voice commands (Andersen 2001, Chapter 16). Spoofing could also be used to escalate a volatile situation in the hopes of starting a nuclear war. “ \*\*[they cut off the paragraph]\*\* “In June 1998, a group of international hackers calling themselves Milw0rm hacked the web site of India’s Bhabha Atomic Research Center (BARC) and put up a spoofed web page showing a mushroom cloud and the text “If a nuclear war does start, you will be the first to scream” (Denning 1999). Hacker web-page defacements like these are often derided by critics of cyber terrorism as simply being a nuisance which causes no significant harm. However, web-page defacements are becoming more common, and they point towards alarming possibilities in subversion. During the 2007 cyber attacks against Estonia, a counterfeit letter of apology from Prime Minister Andrus Ansip was planted on his political party website (Grant 2007). This took place amid the confusion of mass DDoS attacks, real world protests, and accusations between governments.

### A2: High Skilled Inevitable

#### Wrong – can’t have high skilled without pathway to citizenship

Ferenstein 12-1 (Gregory, “No Exceptions for Tech Industry: High Skilled Visas Now Tied to Comprehensive Reform,” Tech Crunch, 2012, http://techcrunch.com/2012/12/01/no-exceptions-for-tech-industry-high-skilled-visas-now-tied-to-comprehensive-reform/)

Powerful technology lobbies expected special treatment this week from Congress and got a tough lesson in rejection: there will be no more high-skilled work visas without comprehensive immigration reform. The probable failure of the STEMS Jobs Act, which would add 55,000 work visas for science-oriented immigrants, has become a casualty of war over the low-skilled immigrants dilemma.

#### No piecemeal – only comprehensive

Camargo 2-7 (Raisa, “Senate Democrats signal citizenship is not extreme,” Voxxi, 2013, <http://www.voxxi.com/senate-citizenship-not-extreme/>)

Democratic Senators including Senate Majority leader Harry Reid signaled during a roundtable discussion with Hispanic media that they would not pause for a second when it comes to pursuing a comprehensive bill that includes a pathway to citizenship, of what they signal can take an estimated 10 years. The Senators were quick to indicate that they would do everything in their power to get a bill passed. “We’re not going to do anything piecemeal. That’s over,” said Reid. “Nothing is going to come forward unless there is a pathway to citizenship for the people that are here who are undocumented and I am committed to getting this done.” Brushing off concerns of what some House Republicans have noted as an alternative path to citizenship considering it might be “extreme,” key Senators who are involved in framing out legislation on immigration reform told reporters Thursday that they’re confident they’re headed in the right direction considering they have strong bipartisan support.

### Will Pass – 2NC

#### CIR will pass now --- multiple warrants --- that’s our 1NC NYT --- Obama’s got just enough PC to get it through at the top of the agenda --- using his leverage to get the gang of eight to build momentum for the bill

#### GOP’s on board BECAUSE OF political capital

Dionne 2-6 (EJ, Columnist – Washington Post, “GOP Will Back Immigration Reform,” 2013, <http://www.goerie.com/article/20130206/OPINION09/302069992/EJ-Dionne%3A-GOP-will-back-immigration-reform>)

That's the comparison to keep in mind to understand the extraordinary transformation of Beltway politics on immigration reform. Until Obama was re-elected, party competition translated into Republican efforts to block virtually everything the president wanted to accomplish. On immigration, at least, the parties are now competing to share credit for doing something big. It's wonderful to behold. Republicans who always held views on immigration similar to the president's -- notably Sen. John McCain -- are now free to say so. Other Republicans who thought a hard line on the issue was a political winner have been forced by the electoral facts to change their minds. Democrats, aware of how important Latino votes are to their party's future, are determined to get immigration reform done. Nothing is certain in Washington, especially in the Republican-led House of Representatives, but the odds that we will finally fix a broken immigration system are very high. The behind-the-scenes wrangling over the choreography of last week's twin immigration announcements -- by a bipartisan group of senators and by the president in a speech in Nevada -- shows how strong the bias toward action has become. We've become so accustomed to the politics of obstruction that we forget there is still such a thing as legislative craftsmanship. The Jan. 25 proposal by eight senators of their ideas for reform was months in the making as Sens. Charles Schumer, D-N.Y., and Lindsey Graham, R-S.C., worked closely with their colleagues to prepare for this moment. But Obama felt compelled to make clear early on that immigration reform was one of his highest priorities. The Senate negotiators worried that if Obama got out front with positions more progressive than theirs, particularly on a speedier path to citizenship for illegal immigrants, he could foil their efforts to reach accord. This fear reflected the GOP's Obama-can't-win response to whatever he does. Until now, Republicans criticized him for not taking "leadership" in pushing for immigration reform. But as soon as he was ready to speak out, the GOP switched direction, warning that his leadership was the last thing they wanted -- and could get in the way of a compromise. Thus did House Speaker John Boehner use a spokesman to instruct Obama to be "careful not to drag the debate to the left and ultimately disrupt the difficult work that is ahead in the House and Senate." As it happened, by letting it be known that he planned to give an immigration speech, Obama sped up the timetable of the Senate group, said a House Democrat active on the issue, and even encouraged a small collection of House Republicans eager for reform to let it be known that they, too, were working toward compromise. Obama sought to thread the political needle by laying out his principles while holding off on proposing a bill of his own. He would send up legislation only "if Congress is unable to move forward in a timely fashion." A relieved Schumer, using words almost never heard in Washington, declared that the president "is handling this perfectly." There will be much posturing over the next several months. By going slightly to the progressive side of the senators, Obama may ease the way for Republicans to strike a deal since they will be able to claim they stayed to the president's right. Conservative supporters of reform, such as Sen. Marco Rubio of Florida, will keep saying critical things about the president to preserve their credibility with the right. And if Boehner is interested in reform, he, too, must play a delicate game of distancing himself from Obama to persuade his most conservative colleagues to acquiesce to a vote on a bill. But make no mistake: This is immigration reform's time. It was poignant to hear McCain state plainly and eloquently what he has always felt. "We have been too content for too long," he said, "to allow individuals to mow our lawn, serve our food, clean our homes and even watch our children, while not affording them any of the benefits that make our country so great." Thanks to an election, those words are no longer politically incorrect inside John McCain's party.

#### Will pass – new polls show rank and file GOP members on board with CIR

NYT 2-8 [Signs of a Shift on Immigration Among G.O.P. Rank-and-File, February 8th, 213, <http://fivethirtyeight.blogs.nytimes.com/2013/02/08/signs-of-a-shift-on-immigration-among-g-o-p-rank-and-file/>, Chetan]

With notable speed after the Nov. 6 presidential election, a number of Republican politicians and opinions makers — from House Speaker John A. Boehner to the talk show host Sean Hannity — altered their positions on immigration and expressed a new openness to comprehensive reform. Since then, the push to overhaul the nation’s immigration system appears to have sustained momentum. A new ABC News/Washington Post poll found a jump in public approval of President Obama’s handling of immigration, and most recent polls have found a majority of Americans support providing immigrants who have come here illegally a pathway to United States citizenship. So, has the shift on immigration among some — but not all — Republican legislators, strategists and media personalities filtered down to rank-and-file Republicans? The polling evidence — with a few significant caveats — says “possibly, yes.” There are signs of an uptick in Republican support for a pathway to citizenship, or at least a conditional pathway to citizenship. First, the caveats. Tracking opinions on immigration policy over time is tricky because each pollster asks different questions with different options, making for apples-to-oranges comparisons. In addition, when narrowing the focus to self-identified Republicans and Republican leaners, small sample sizes and large margin of sampling errors become a problem. A typical national survey includes about 1,000 respondents, making the subsample of Republicans pretty small, usually around 200 to 300. But keeping those disclaimers in mind, the most recent polls on immigration suggest an increase in the percentage of Republicans who favor immigration reform that includes a route to United States citizenship.

#### It has momentum, but PC is key

VOA 2-6 (Voice of America News, “Battle over Immigration Reform Gathers Steam,” 2013, <http://www.albanytribune.com/06022013-battle-over-immigration-reform-gathers-steam/>)

U.S. President Barack Obama is expected to make immigration reform a priority in his State of the Union Address. But already, talk of tackling this controversial issue is gaining momentum. There are an estimated 11-million illegal immigrants in the United States with more still hoping to cross the border. Claudia Hernandez came here as a child, and like many in her situation, she feels she belongs in the U.S. “I have been here more than half of my life, and I respect the United States. This is my country,” she said. Only days into his second term, President Obama began the push for change. “The time has come for common-sense, comprehensive immigration reform,” he stated. “The time is now.” Already, Congress has begun to hold hearings. And a bipartisan group of senators, including former Republican presidential candidate John McCain, is pushing ahead with a plan of its own. “We have been too content for too long to allow individuals to mow our lawn, serve us food, clean our homes and even watch our children while not affording them any of the benefits that make our country so great,” McCain said. The bi-partisan plan calls for tighter border controls as well as a path to citizenship, something President Obama insists upon. That worries Jim Gilchrist. He founded the Minuteman Project, a citizen’s group that helps guard the border. “If we are going to grant amnesty to 15 to 30-million people, who are here illegally now, we are going to be granting amnesty to 300 million,” he added. “Who will follow them over the next several decades.” Other activists and lawmakers say proposals to secure the borders don’t go far enough – even though the United States spends more money on immigration enforcement than on all other federal law enforcement activities combined. In the meantime, the pressure is on – both President Obama and Congress.

#### Immigration will pass – Obama’s pushing and it’s a top priority [also answers high tech inevitable]

Foley 2-7 (Elise, Reporter, “Obama on Immigration Reform: Politics Not Easy, But 'Now Is The Time',” Huffington Post, 2013, <http://www.huffingtonpost.com/2013/02/07/obama-immigration-reform_n_2638843.html>)

President Barack Obama reiterated to House Democrats on Thursday that he is relying on their support for comprehensive immigration reform, even if they fear the political ramifications. "I recognize that politics aren't always easy, there are regional variations," he said at a conference here for the House Democratic caucus. "I understand that in some places this may end up being a tough issue. But what I also know is that part of our strength is our youth and our dynamism, and our history of attracting talent from all around the world." Obama's immigration push hit full speed last week with a speech in Las Vegas, where he called for a pathway to citizenship for undocumented immigrants, more border security and better interior enforcement. A bipartisan group in the Senate dubbed the "gang of eight" released a similar framework for reform, but tied green cards to yet-to-be-determined border metrics to disallow immigrants granted provisional status from becoming legal permanent residents until those triggers were met. Obama applauded the work being done in Congress on immigration. "I am heartened to see Republicans and Democrats starting to be in a serious conversation about getting this done," he said. "Now is the time." The biggest fight on immigration reform will be over a pathway to citizenship. Many House Republicans have said they might support a middle ground that would allow undocumented immigrants to stay in the U.S., but not to become citizens. Only 10 percent of American voters support such a plan, while 56 percent believe the undocumented should be allowed to eventually become citizens, according to a Quinnipiac University poll released Thursday. Obama has reiterated repeatedly, both in public and in private meetings with advocates and members of Congress, that he will not accept a bill without a pathway to citizenship, although he did not get into the issue on Thursday. He acknowledged that the politics of the issue were difficult, as he did later when discussing the need for gun control. But, like Vice President Joe Biden the day before him, he encouraged Democrats to think of what's right first and their own political aspirations second. "As long as we keep in mind why we came here in the first place, as long as we think back to whatever inspired each of us to say, 'Maybe I can give something back, maybe I can make a difference, maybe my purpose here on earth is not just to think about what's in it for me,'" he said. "Thinking about what's in it for the broader community, my neighborhood, or my state, or my country. If we keep that in mind every single day, **I have no doubt that we will continue to make progress**."

**Vote count**

**Huffington Post 1/30** http://www.huffingtonpost.com/2013/01/30/john-mccain-chuck-schumer-immigration\_n\_2581387.html

Sens. Chuck Schumer (D-N.Y.) and John McCain (R-Ariz.) laid out more of their group's plans on Wednesday for immigration reform, including their optimistic goal of **80 votes** for a final bill in the Senate. Well, maybe. Speaking at a Politico Playbook breakfast, the two went on to admit they might be, as McCain said, a little "Pollyanna-ish." "Senator Schumer and I are presenting maybe too rosy a picture here today," he said. "It's going to be a tough slog. It's going to be a tough, tough fight." Schumer and McCain are part of an eight-member group -- dubbed the "gang of eight," although McCain said he dislikes the term -- that released a framework for immigration reform on Monday. Sens. Dick Durbin (D-Ill.), Bob Menendez (D-N.J.), Michael Bennet (D-Colo.), Lindsey Graham (R-S.C.), Marco Rubio (R-Fla.) and Jeff Flake (R-Ariz.) are the other members of the group. They plan to meet every Tuesday and Thursday until a bill is crafted, ideally within the next month or two, Schumer and McCain said. Their staffs will meet on Wednesdays to work out further details, and plan to meet later Wednesday with officials from the Department of Homeland Security to discuss border concerns. The group's plan would give a pathway to citizenship for undocumented immigrants, albeit a tough one. Undocumented immigrants already living in the United States could gain provisional status to stay in the country, but could not receive green cards until certain border security metrics are met. President Barack Obama's plan, which he laid out on Tuesday, does not include such a requirement. McCain said the border element is absolutely crucial. A number of lawmakers fear that immigration reform will give status to undocumented immigrants but not prevent a future surge, similar to the aftermath of a bill signed into law by Republican President Ronald Reagan in 1986. He and Schumer said they want an open legislative process on immigration reform, taking the bill through committee and then onto the floor with the ability for fellow senators to offer amendments. They said they don't expect to agree on all amendments, but want to stick broadly to their framework. That could help them win over a majority of Democrats and ideally a majority of Republicans as well, McCain said. Schumer said later that they will also "**educate" the House** of Representatives through that process. They plan to work with a bipartisan group in the House and the Congressional Hispanic Caucus on reform plans, they said. In part, McCain admitted it's good politics for Republicans. But he made a dire warning for Republicans if they take down immigration reform: the trend of the Latino vote toward Democrats will continue. "As you look at demographics in states like mine, that means that we will go from Republican to Democrat over time," he said. The process began after the November 2012 election, when GOP presidential nominee Mitt Romney won only a small percentage of the Hispanic vote, attributed by many to his hardline immigration stances during the Republican primary. Many members of the group had already worked together on reform. Schumer said Graham called him to say he wanted to restart the process. "**'The band is back**. Let's do immigration. And I've talked to John McCain and he wanted to get involved,'" Graham said, according to Schumer. "And my heart went pitter patter," he added.

**Compromises now**

**CNN 1/29** <http://www.cnn.com/2013/01/29/politics/immigration-plan-bipartisanship/index.html>

An immigration proposal crafted for months in secret by a **high-profile, bipartisan cadre** of senators is both a rare moment of simpatico in politics and a matter of political practicality. President Barack Obama, who won re-election with strong support from Latinos, the fastest-growing demographic, has called an overhaul of immigration a second-term priority. Meanwhile, Republicans who lost the Latino vote by large numbers, have **signaled** that mainstream members might be **willing to compromise on thorny** immigration issues. "There aren't a whole lot of other issues where Republicans think they need to compromise or Democrats think they need to compromise," said Clyde Wilcox, a government professor at Georgetown University. "There's two different ways this could be viewed this. It's either a **Kumbaya moment ... or both sides see that** on this particular issue there's a necessity for compromise." But the deal is far from done. The plan could face stiff opposition in the House of Representatives, where conservatives and tea party leaders have resisted any compromise that even hints at relief or amnesty for those already in the country illegally. House Republicans are also working on a plan of their own, seeking bipartisan support. And Obama is said to have drafted his own detailed plan, which could differ from the Senate proposal in key areas, including border security and a path to legality. The senators announced their plan a day before Obama speaks in Las Vegas on immigration, signaling a major push by both sides to focus on the contentious issue in the new Congress. Aides said the president's remarks on Tuesday will touch on the blueprint he's detailed in the past: improving border security, cracking down on employers who hire undocumented workers and creating a pathway to "earned" citizenship for undocumented immigrants. Those provisions align closely with what the eight senators laid out in a framework of their legislation, which CNN obtained Sunday. Possible compromise on immigration takes shape Obama previously came under criticism from Latino activists for failing to deliver on a 2008 campaign promise to make immigration reform a priority of his first term. Last year, as the campaign heated up, the Obama administration announced a halt to deportations of some young undocumented immigrants in a move that delighted the Latino community. Exit polls in November indicated Latino voters gave overwhelming support to Obama over GOP challenger Mitt Romney, who had advocated a policy that amounted to forcing undocumented immigrants to deport themselves. Since the election, mainstream Republican leaders and some conservatives such as Sen. Marco Rubio, a child of Cuban immigrants and a rising star in the party, have called for addressing the immigration issue instead of ceding the Latino vote to Democrats. "There is a **new**, I think, **appreciation** on **both sides** of the aisle -- including maybe more importantly on the Republican side of the aisle -- that we have to enact a comprehensive immigration reform bill," Sen. John McCain, R-Arizona, said Sunday.

### AT: Thumpers

#### Both Republican and Democratic insiders agree that immigration tops the agenda

National Journal 2-9 [Insiders Rate Jobs, Immigration, Deficit As Top Priorities, February 9th, 2013, <http://www.nationaljournal.com/blogs/hotlineoncall/2013/02/insiders-rate-jobs-immigration-deficit-as-top-priorities-09>, Chetan]

Despite the storied paralysis in Washington, Democratic and Republican insiders came to a rare moment of consensus this week on what priorities should top their parties' agendas this year. Insiders of both parties agreed that immigration and jobs were the most important issues to tackle, with Republicans also throwing their weight behind deficit reduction. The anemic economy was cause for concern for both Democratic and Republican Insiders. "Jobs solve so many problems! Everyone wants a balanced budget, but they would prefer to be employed!" said one Democrat. Another pointed to the political consequences for the party the status quo remained. "If the unemployment rate continues to hover around 8 percent, the midterm elections will be difficult for Democrats. Jobs, jobs, jobs." A Republican Insider echoed the point: "Since when did 7.8 percent unemployment become the new normal?" "Jobs would indicate we actually were awake," another Republican added. Several also pointed to the urgency of getting immigration reform done. Republican Insiders saw it as a chance to make amends with a fast-growing voting bloc-one that the party has alienated in past election cycles. "Do Republicans really want immigration used against them again in '14, '16, and beyond? Do comprehensive now and give a future candidate a chance to be heard by more than 47 percent of the electorate," one said. "If we can be enlightened on immigration, we give ourselves some sort of future," another added. Democrats, meanwhile, viewed immigration reform as a chance to make Hispanics a permanent part of their coalition. "Democrats must lock in the image with the fast-growing Hispanic communities, as we have done for decades with African-Americans, that they can be at 'home' with our party," one said. "Gotta get immigration done, at least to thank the Latinos who gave Obama his margin," another said.

### A2: Thumper – Gun Control

#### Obama won’t use PC to push gun control

Cain 2-5 (Michael, Writer, “Gun Control Legislation is Another Victim of Our Short Attention Span,” Policy Mic, 2013, <http://www.policymic.com/articles/24939/gun-control-legislation-is-another-victim-of-our-short-attention-span>)

There are too many guns in private hands in the U.S. to ever hope for a successful ban of private ownership — simple logistics — so don’t waste cycles trying to deny it. There’s also the matter of the Second Amendment. It’s conceivable that someone will sponsor a bill to repeal it, but before you get excited about it, take a look at what happens next. During all the debates, each side will flood the blogosphere with statistics, sometimes outrageous statistics, to defend their point of view. Recently the National Rifle Association (NRA) ran a TV ad claiming President Obama was being elitist for downplaying school security when his own children attended a school with armed security guards (exclusive of the Secret Service). The ad was pulled when it was revealed to be a complete fabrication. Wayne LaPierre knows how short our memories are and that if he does a poll in six months he’ll still find people who use his lies to support their position. The president knows these things, and he isn’t about to spend valuable political capital trying to rise against the tide. Within 60 days, nobody in Washington will be talking about gun control. They will have moved on to more pressing matters, confident they have presented a brave attempt which will placate their constituents until the next time. The trouble is there seems to always be a next time. Whether it’s guns, or earmarks, fiscal cliffs or sequestration, they talk and they kick the can down the road in hopes that voters will follow the time honored tradition of throwing up their hands in frustration. Face it, Washington doesn’t want to solve problems; Washington wants to solve re-election fears. They can’t get re-elected by solving problems, because every problem solved is inextricably attached to voters who disagree.

#### Obama pushing immigration – gun control not top

Pace and Werner 1-25 [Julie, Erica, AP writers, "White House, senators to start immigration push" Twin Cities Pioneer Press -- [www.twincities.com/national/ci\_22454002/white-house-senators-start-immigration-push](http://www.twincities.com/national/ci_22454002/white-house-senators-start-immigration-push)]

The president met privately Friday with the Congressional Hispanic Caucus to discuss his next steps on immigration. Among those in the meeting was Rep. Linda Sanchez, D-Calif., who said Obama told lawmakers "**immigration reform is his number one legislative priority**."¶ That could bump back the president's efforts to seek legislation enacting stricter gun laws, another issue he has vowed to make a top second-term priority.

#### Nothing for months

CBS 1-9 <http://www.cbsnews.com/8301-250_162-57562942/bidens-meetings-spotlight-gun-control-divide/>

But as the shock and sorrow over the Newtown, Conn., shooting fade, the tough fight facing the White House and gun-control backers is growing clearer.¶ Gun-rights advocates, including the powerful NRA, are digging in against tighter gun restrictions, conservative groups are launching pro-gun initiatives, and the Senate's top Republican has warned **it could be spring before Congress begins considering any gun legislation.**

#### Engaging the public on guns – NOT capital with congress

AP 1 – 15 [Obama Proposing Gun Limits, Faces Tough Obstacles, http://www.npr.org/templates/story/story.php?storyId=169390749]

White House officials signaled that Obama would seek to rally public support for the measures he puts forward, perhaps holding events around the country or relying on Organizing for America, his still-operational presidential campaign.

"The president's success in using this strategy, I think, is pretty notable," Carney said of Obama's efforts to engage the public in previous legislative fights. "He'll absolutely continue to engage with the American people on the policy proposals he's putting forward."

Still, **it's unclear how much political capital Obama will exert** in pressing for congressional action.

### A2: Thumper – Budget

#### All signals point towards the GOP backing down – their won’t be a fight – extension is inevitable – their ev is just hype

Kaletsky 1-23 [Anatole, journalist, financial economist, “Cooperation isn’t coming to Washington – it’s already arrived,” Reuters -- http://blogs.reuters.com/anatole-kaletsky/2013/01/23/cooperation-isnt-coming-to-washington-its-already-arrived/]

The House of Representatives decision to suspend the U.S. Treasury debt limit is the most important political event in America since President Barack Obama was first elected in 2008. As anticipated in this column immediately after the 2012 election, Washington seems to have broken its addiction to deadly games of economic chicken. That, in turn, should mean an orderly resolution of all U.S. fiscal problems and perhaps even an outbreak of bipartisan political cooperation, at least on economic issues, of a kind not seen in Washington since the early 1990s.¶ None of these favorable outcomes is yet acknowledged as true in Washington or Wall Street. Political analysts and market pundits have almost unanimously described the House decision as a diversionary tactic, simply designed to shift the high-noon confrontation with Obama to a new battleground more favorable to the Republican side: the March 1 date for automatic spending cuts under the sequestration procedure, or the March 27 expiration date of current government budgets.¶ This cynicism will almost certainly be proved wrong. The obvious reason is that **an army in full retreat,** as the Republicans have been since the election and fiscal cliff fiasco, finds it hard to regroup against an enemy enjoying strong momentum. And when such a battered force does attempt a last stand, this usually results in a rout. In this case, however, there are more specific reasons for the Republicans to seek peaceful coexistence instead of the fight-to-the-death over borrowing and spending that many pundits still predict. To see why House leaders decided to unilaterally disarm their nuclear weapons — first the fiscal cliff and now the debt ceiling — one has to understand the transformation in U.S. political dynamics that occurred the moment the votes were counted on Nov. 6.¶ Before the election, Republicans and their business backers had two overriding reasons to obstruct any deals with Obama on borrowing, spending or taxes. First, most Republicans genuinely expected to win the presidential election and therefore had every incentive to defer important decisions until their man was in power. Secondly, they calculated that any collateral damage inflicted on the economy through fiscal warfare would harm the incumbent president, whose Achilles’ heel was economic policy. Once the election was over, this calculus completely changed.¶ Having failed to unseat Obama, Republicans were suddenly in a situation where sabotaging the economy was no longer in their interests. As I argued immediately after the election, and again during the fiscal cliff negotiations, the GOP had few incentives after Nov. 7 to just thwart Obama. Republicans now had to persuade voters that their policies would promote jobs and growth — and would do so immediately, not in some distant future when budgets would have to balance or else the United States would turn into Greece.¶ The election also changed motivations for the Republicans’ business supporters. Instead of viewing Washington gridlock as a weapon for defeating Obama, American businesses after the election **had to accept the inevitable**. They would have to live with Obama and his policies, however much they disliked them. For most U.S. businesses, the primary political consideration was no longer the ideological debate over taxing and spending, but a purely economic issue: How would the economic policies negotiated between the White House and Congress affect business conditions in the four years leading to 2016?¶ This gestalt shift implies that **Republicans are unlikely to press very hard for large-scale spending cuts, government layoffs or fiscal tightening that could be seen as harming economic** recovery. Instead the focus should move to long-term budget reforms, designed to take effect only after the economy has largely recovered in 2015 or so – conveniently beyond the next congressional elections.¶ The president will have **strong incentives** to cooperate with such gradual fiscal consolidation, with major budget cuts backloaded to the last years of his administration and beyond. He would rather go down in history as the man who delivered universal healthcare, saved the U.S. economy from its worst crisis since the Great Depression, and put U.S. fiscal policy on a sustainable footing than waste his entire second term haggling over budgets – especially since achieving fiscal austerity does not require any major cuts or austerity, except in the very long term. ¶ In fact, the White House has already said it will offer some long-term entitlement reforms as part of the bipartisan budget deal that now looks eminently attainable. This may infuriate left-wing Democrats, but Obama is unlikely to care much, now that he has been reelected. In any case, grassroots Democratic voters will probably care more about presidential efforts on gun control, immigration and climate change than about wonkish arguments over Chained CPI and Medicare spending caps in the next decade.¶ Why then has there been little discussion of this change in political dynamics? Probably because **the media mostly see it as their role to magnify political drama rather than to analyze how they are likely to be resolved. The same applies to many professional politicians. Extreme statements from both parties will always attract the most media attention**. The congressional arithmetic, however, means that the views of radicals, highlighted by the media, are no longer very important.

#### Budget deal is low on the agenda – if deal is unpopular the Democrats just won’t push it

Blunt 1/27 – Roy Blunt is the Republican Senator from Missouri, Budget's not high on Dems' to-do list, Politico, http://www.politico.com//story/2013/01/budgets-not-highon-dems-to-do-86777.html

‘Show me your budget, and I will tell you what you value.” That’s what Joe Biden said last summer, and he meant it as a criticism of Republicans. The vice president’s comment raises a question: Where are the Democrats’ values? They’re in hiding, judging from their unwillingness to present any budget plans for almost four years. Republicans have drawn up and voted for serious budgets that make tough choices — even though making those choices exposed our side to political attacks. We were willing to take the hits, accept the controversy and make our case to the American people. The budgets we have proposed have, just as Biden said, reflected our aspirations: a strong defense, an affordable safety net, a private sector with the running room to thrive and renewed economic growth. The Democrats have been less forthcoming. Senate Democrats now routinely ignore their legal obligation to pass a budget. House Republicans say that the Senate should either pass a budget or forfeit its pay — and they are right. Too often, though, the press has treated the Senate’s failure to budget as a minor procedural matter. On the few occasions when reporters ask Democrats why they have chosen to dispense with budgets, Democrats have offered non-answers. Sen. Chuck Schumer (D-N.Y.), for example, claimed that Democrats did not need to have budgets because of the sequester deal of mid-2011. The Senate parliamentarian said that action wasn’t a budget and she was right. We will see whether Schumer’s words prove more binding on Democrats than the budget laws have been. In all likelihood, **Democrats have opted not to pass budgets because they believe the political price would be too high.** Budgets lay out plans and the Democrats don’t have any plans that will pass the straight-face test with the American people. The public will not tolerate the amount of debt and taxes that their spending plans require. If the federal government is to come anywhere close to balancing the budget at the elevated spending levels the Democrats desire, we will have to tax Americans at all income levels at historically unprecedented rates. Or we will have to accept crippling and dangerous levels of federal debt — much worse even than today’s. Debt and taxes beyond anything we’ve ever seen: That future may reflect the values of today’s Washington Democrat, but it’s not a political message they can afford to send. Worse still for the Democrats, a budget of their own would take the sting out of their attacks on Republicans. Right now, they can attack Republicans for savage cuts without having to make an apples-to-apples comparison. They don’t compare our spending restraint, for example, to the ruinously high middle-class taxes their own policies will require. They compare our budget, implicitly, to a fantasyland where no choices need ever be made — where budgeting is no longer necessary. It’s been said that failing to plan is planning to fail. When it comes to our budgetary future, though, that’s the Democrats’ strategy. As Treasury secretary, Timothy Geithner, you may recall, openly told Congress that the administration has no plan to deal with the long-term debt problem; it just knows it doesn’t like the Republican plan. My Republican colleagues and I have voted for a budget that levels with the public about the difficult choices we face in this fiscal environment. It’s time Democrats do the same.

#### No budget fights till August

Associated Press 1/31 – Washing Post Online, Congress passes bill to extend federal borrowing authority and avert default; Obama to sign, http://www.washingtonpost.com/politics/congress/senate-to-clear-debt-limit-increase-for-obama-as-washington-moves-on-to-new-fights/2013/01/31/f25762f0-6b7c-11e2-9a0b-db931670f35d\_story.html

WASHINGTON — Congress passed must-do legislation Thursday to permit the government to borrow hundreds of billions of dollars more to meet its obligations, averting a first-ever government default that had loomed as early as mid-February. The 64-34 vote in the Democratic-controlled Senate sent the measure to President Barack Obama, who has said he will sign it. The Republican-led House passed the legislation last week. The micro-blogging network was down for some users Thursday; others reported issues with Vine. The legislation would temporarily suspend the $16.4 trillion limit on federal borrowing, which experts say would allow the government to borrow about $450 billion to meet interest payments and obligations like Social Security benefits and government salaries. The deadline for Congress to act again to prevent default would likely not come until August, according to calculations by the Bipartisan Policy Center, a Washington-based think tank. Without the bill, the Treasury Department says, the government would default on its obligations by as early as mid-February.

#### Budget being delayed now – it’s after the disad

Krawzak 1-8 [Paul, staff writer, "Obama's budget is running late" Roll Call -- www.rollcall.com/news/obamas\_budget\_is\_running\_late-220638-1.html]

The Obama administration’s fiscal 2014 budget is widely expected to arrive late on Capitol Hill, possibly not until sometime in March, primarily as a result of uncertainty created by fiscal cliff negotiations.¶ The White House and Office of Management and Budget have not said when the budget will be released. By law, the spending proposal is due the first Monday in February, which will be Feb. 4. Fiscal 2014 will begin Oct. 1.¶ “I think everyone that I’ve talked to, everyone’s expecting March,” said Patrick Lester, federal fiscal policy director at the Center for Effective Government, formerly called OMB Watch.¶ One Republican congressional aide guessed that the earliest the budget would be released would be Feb. 11 but said Feb. 18 was more likely.¶ A Pentagon official said that as of the end of last week, departments and agencies had not yet been told by the White House how much money they will have to work with in their fiscal 2014 budgets, a process known as “passback.” That information is usually conveyed in late November, after the administration has reviewed the agencies’ budget requests.¶ By this point in the budgeting process, the administration has typically communicated to departments the changes it has decided to make in their budget requests, and the agencies have responded by appealing decisions they do not like or by trying to work out a compromise with the OMB. Agencies begin submitting budget data to the OMB after passback.¶ Robert F. Hale, the Pentagon’s comptroller, said Monday that he expects the defense budget to be late. “I think it’s almost inevitable there will be some delay, I just don’t know what,” he said. “Normally, we would be transmitting data to OMB right now, and we’re not ready to do that.”

#### Obama shifting focus away from budget now

Beutler 1-22 [Brian, senior congressional reporter, "Republicans Resist Obama Effort To Turn The Page On Budget Fights" Talking Points Memo -- lexis]

Notwithstanding his recent successes, those fights were responsible for the lowest moments in his first term. And so after a decisive re-election, **Obama is trying to flip the script**-which is why his inaugural address seemed so incongruous. ¶ Obama treated as settled long-standing disagreements over programs like Medicare, and alluded only once to the idea that federal deficits are too high. Instead, he tried to change the focus to a new agenda that includes gun control, equal rights, and immigration reform - issues unlike the budget that fall right in the sweet spot of a president re-elected by a coalition of women, minorities, and young and gay voters.

#### The fight is with the Senate, not Obama and they’re caving on everything anyway

Antle 1-25 [W. James, Editor, "ANALYSIS: GOP seeks leverage on spending fight" The Daily Caller -- dailycaller.com/2013/01/25/analysis-gop-seeks-leverage-on-spending-fight/]

Congressional **Republicans have been losing the fight over government spending with** President Barack **Obama**, but they like their odds against Senate Majority Leader Harry Reid. That’s the upshot of the House leadership’s latest budgetary gambit.¶ Originally, Republicans hoped to win budget reductions as part of the year-end fiscal cliff negotiations. Then they said they would fight for them when it came time to raise the debt ceiling. When the Republican-controlled House voted Wednesday for a three-month extension of the debt limit, they said they would target spending during the debate over the sequester and the continuing resolution.¶ Some conservatives felt the House Republican leadership was prolonging the inevitable, but many were won over by the “No Budget, No Pay” provision withholding lawmakers’ paychecks if they fail to produce a budget on time. The Democratic-controlled Senate hasn’t passed a budget since 2009.¶ “It took one week with Senate pay on the line, for them to step up,” House Majority Leader Eric Cantor tweeted after the bill passed the House, 285 to 144.¶ A number of conservatives were also swayed by the House leadership’s commitment to balance the budget in 10 years. The budget passed by the House last year didn’t balance until 2040. House Republicans are also pledging to support the sequester, saying they will negotiate on the composition of the across-the-board spending cuts but not the dollar amount.¶ Call it balancing political reality with balancing the budget. Republicans have a majority in the House, where tax and spending bills originate. But they don’t control the White House or Senate and can’t set fiscal policy on their own. So the GOP needs to frame the spending debate carefully to stand a chance at succeeding.¶ House Republicans hope that by shifting from a showdown with the president over the debt ceiling — with the nation’s credit rating hanging in the balance — to a confrontation with the Senate they are picking a fight they can actually win.¶ “We need an intervention on spending,” Ohio Republican Rep. Jim Jordan, formerly chairman of the Republican Study Committee, told The Daily Caller News Foundation after the the fiscal cliff deal passed. Jordan opposed both that legislation and House Speaker John Boehner’s failed “Plan B” alternative.¶ But Jordan voted with the leadership on Wednesday, along with current RSC chairman Louisiana Rep. Steve Scalise and fellow past chairmen Texas Rep. Jeb Hensarling and Georgia Rep. Tom Price.¶ “It’s simple: The American people expect Washington to pass a budget and live by it,” the four congressmen said in a statement after the plan was first announced. “No budget, no pay.”¶ Unlike Plan B, when activists felt blindsided by the GOP leadership’s sudden reversal on higher income tax rates for anyone, there was an effort to persuade conservatives inside and outside Congress of the merits before a vote. “Frankly,” Americans for Tax Reform president Grover Norquist told The Daily Caller News Foundation at the time, “Republicans didn’t explain [Plan B] very well.”¶ “The Senate was never going to pass Plan B,” Michigan Rep. Justin Amash told The DC News Foundation after the final fiscal cliff vote. “So we would have ended up right where we are now.” This time, GOP leaders used the House Republican Conference’s January retreat to try to unify the rank-and-file behind their approach.¶ The fiscal cliff was difficult for Republicans because it involved the expiration of the Bush tax rates in addition to possible spending cuts. The GOP needed to take positive steps to avoid an across-the-board increase in income tax rates. When the three-month debt limit extension ends, Republicans hope their bargaining posture will be strengthened by having taxes off the table and the existing law on their side.¶ Still, 33 House Republicans — including Amash — voted against the No Budget No Pay Act. Kentucky Republican Sen. Rand Paul accused House leaders of waving “the white flag of surrender.” Paul’s allies at Campaign for Liberty released a statement the Friday before the vote saying, “**The Republican retreat was only supposed to last a week, but now it appears it will last the entire 113th Congress**.”

### A2: No Vote

#### Will pass even without bill

Sullivan 2-3 (Sean, “Reid: Senate Will Pass Immigration Reform, “ Washington Post, 2013, <http://www.washingtonpost.com/blogs/the-fix/wp/2013/02/03/reid-senate-will-pass-immigration-reform/?wprss=rss_politics>)

Senate Majority Harry Reid (D-Nev.) guaranteed Sunday that the Senate would pass sweeping immigration reform measures, and warned House Republicans against blocking the renewed attempt to overhaul the nation’s current immigration laws. “Well, it’s certainly gonna pass the Senate. And — it would be a bad day for our country and a bad day for the Republican Party if they continue standing in the way of this,” Reid said in an interview broadcast Sunday on ABC News’ “This Week With George Stephanopoulos.” While specific legislation has yet to be introduced, a bipartisan group of senators last week unveiled a sweeping set of principles designed to guide the reform effort. The plan includes a proposed pathway to citizenship for the nation’s more than 11 million illegal immigrants.

### PC K WW

#### Doesn’t say PC irrelevant just says it’s complex-evaluate our specific arguments

**Hirsch, National Journal chief correspondent, 2-7-13**

(Michael, “There’s No Such Thing as Political Capital”, <http://www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207>, DOA: 2-9-13, ldg)

**The point is not that “political capital” is a meaningless term.** Often it is a synonym for “mandate” or “momentum” in the aftermath of a decisive election—and just about every politician ever elected has tried to claim more of a mandate than he actually has. Certainly, Obama can say that because he was elected and Romney wasn’t, he has a better claim on the country’s mood and direction. Many pundits still defend political capital as a useful metaphor at least. “It’s an unquantifiable but meaningful concept,” says Norman Ornstein of the American Enterprise Institute. “You can’t really look at a president and say he’s got 37 ounces of political capital. But the fact is**, it’s a concept that matters, if you have popularity and some momentum on your side.”** The real problem is that the idea of political capital—or mandates, or momentum—is so poorly defined that presidents and pundits often get it wrong. “Presidents usually over-estimate it,” says George Edwards, a presidential scholar at Texas A&M University. “The best kind of political capital—some sense of an electoral mandate to do something—is very rare. It almost never happens. In 1964, maybe. And to some degree in 1980.” For that reason, political capital is a concept that misleads far more than it enlightens. It is distortionary. It conveys the idea that we know more than we really do about the ever-elusive concept of political power, and it discounts the way unforeseen events can suddenly change everything. Instead, it suggests, erroneously, that a political figure has a concrete amount of political capital to invest, just as someone might have real investment capital—that a particular leader can bank his gains, and the size of his account determines what he can do at any given moment in history. **Naturally, any president has practical and electoral limits**. Does he have a majority in both chambers of Congress and a cohesive coalition behind him? Obama has neither at present. And unless a surge in the economy—at the moment, still stuck—or some other great victory gives him more momentum, it is inevitable that the closer Obama gets to the 2014 election, the less he will be able to get done. Going into the midterms, Republicans will increasingly avoid any concessions that make him (and the Democrats) stronger.

#### Depends on picking the right issues --- links prove the plan is wrong

**Hirsch, National Journal chief correspondent, 2-7-13**

(Michael, “There’s No Such Thing as Political Capital”, <http://www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207>, DOA: 2-9-13, ldg)

And then **there are the presidents who get the politics, and the issues, wrong**. It was the last president before Obama who was just starting a second term, George W. Bush, who really revived the claim of political capital, which he was very fond of wielding. Then Bush promptly demonstrated that he didn’t fully understand the concept either. At his first news conference after his 2004 victory, a confident-sounding Bush declared, “I earned capital in the campaign, political capital, and now I intend to spend it. That’s my style.” The 43rd president threw all of his political capital at an overriding passion: the partial privatization of Social Security. He mounted a full-bore public-relations campaign that included town-hall meetings across the country. Bush failed utterly, of course. But the problem was not that he didn’t have enough political capital. Yes, he may have overestimated his standing. Bush’s margin over John Kerry was thin—helped along by a bumbling Kerry campaign that was almost the mirror image of Romney’s gaffe-filled failure this time—but that was not the real mistake. **The problem was** that **whatever credibility** or stature Bush thought **he had earned** as a newly reelected president **did nothing to make Social Security privatization a better idea in most people’s eyes**. Voters didn’t trust the plan, and four years later, at the end of Bush’s term, the stock-market collapse bore out the public’s skepticism. Privatization just didn’t have any momentum behind it, no matter who was pushing it or how much capital Bush spent to sell it. The mistake that Bush made with Social Security, says John Sides, an associate professor of political science at George Washington University and a well-followed political blogger, “was that just because he won an election, he thought he had a green light. But **there was no sense of any kind of public urgency on Social Security reform**. It’s like he went into the garage where various Republican policy ideas were hanging up and picked one. I don’t think Obama’s going to make that mistake.… **Bush decided he wanted to push a rock up a hill**. He didn’t understand how steep the hill was. I think Obama has more momentum on his side because of the Republican Party’s concerns about the Latino vote and the shooting at Newtown.” Obama may also get his way on the debt ceiling, not because of his reelection, Sides says, “but because Republicans are beginning to doubt whether taking a hard line on fiscal policy is a good idea,” as the party suffers in the polls.

#### Energy is an irredeemable fight-disrupts his push on immigration

**Harder, National Journal, 2-6-13**

(Amy, “In Washington, Energy and Climate Issues Get Shoved in the Closet”, [www.nationaljournal.com/columns/power-play/in-washington-energy-and-climate-issues-get-shoved-in-the-closet-20130206](http://www.nationaljournal.com/columns/power-play/in-washington-energy-and-climate-issues-get-shoved-in-the-closet-20130206), DOA: 2-9-13, ldg)

At a news conference where TV cameras in the back were nearly stacked on top of each other, an influential bipartisan group of five senators introduced legislation late last month to overhaul the nation’s immigration system. The room was so crowded that no open seats or standing room could be found. A week later, one senator, Republican Lisa Murkowski of Alaska, was standing at the podium in the same room to unveil her energy-policy blueprint. There were several open seats and just a few cameras. At least one reporter was there to ask the senator about her position on President Obama’s choice for Defense secretary, former Republican Sen. Chuck Hagel. “I’m doing energy right now,” Murkowski responded. “I’m focused on that.” Almost everyone else on Capitol Hill is focused on something else. Aside from the broad fiscal issues, Congress and the president are galvanizing around immigration reform. Four years ago, the White House prioritized health care reform above comprehensive climate-change legislation. The former will go down in history as one of Obama’s most significant accomplishments. The latter is in the perpetual position of second fiddle. “To everything,” Murkowski interjected fervently when asked by National Journal Daily whether energy and climate policy was second to other policies in Washington’s pecking order. Murkowski, ranking member of the Senate's Energy and Natural Resources Committee, said she hoped the Super Bowl blackout would help the public understand the importance of energy policy. “This issue of immigration: Why are we all focused on that? Well, it’s because the Republicans lost the election because in part we did not have the Hispanic community behind us,” Murkowski said this week. “What is it that brings about that motivation? Maybe it could be something like a gap in the Super Bowl causes the focus on energy that we need to have. I can only hope.” It will take more than hope. Elections have consequences, but so far the only kind of electoral consequence climate and energy policy has instigated is one that helped some lawmakers who supported cap-and-trade legislation to lose their seats in the 2010 midterm elections. For the pendulum to swing the other way—for lawmakers to lose their seats over not acting on climate and energy policy—seems almost unfathomable right now. Billions of dollars are invested in the fossil-fuel power plants, refineries, and pipelines that the country depends on today. The companies that own this infrastructure have a business interest in keeping things the way they are. Immigration reform doesn’t face such formidable interests invested in the status quo. “They [businesses] have employees—real, visible people—who they value and who they want to make legal as soon as possible,” said Chris Miller, who until earlier this year was the top energy and environment adviser to Senate Majority Leader Harry Reid, D-Nev. On energy and climate-change policy, Miller added, “You’re probably never going to have anything like the fence in the Southwest or the border-control issue that **push**es action and debate **on immigration**, because climate-change impacts will likely continue to be more abstract in the public's mind until those impacts are so crystal-clear it’s too late for us to do anything.” Another, tactical reason helps build momentum on immigration and not on other issues. **Obama can capitalize on immigration** as it becomes more of a wedge issue within the GOP. On energy and climate policy, Obama faces a unified Republican Party. “**The president has cracked the code on how to push his agenda items through**. He learned from his victories on the payroll tax and the fiscal cliff that the key is to stake out the political high ground on issues that poll in his favor while exploiting the divisions within the GOP,” said a former Republican leadership aide who would speak only on the condition of anonymity. “**With this in mind, the next logical place for him to go is immigration. Unlike issues like energy** or tax reform where the GOP is united, he can claim a big win on immigration reform while striking a political blow to Republicans.”

**A2: Winners Win – 2NC**

**Obama thinks that pol cap is finite – he’ll back off controversial issues even if he’s winning**

**Kuttner 9** (Robert – , co-editor of The American Prospect and a senior fellow at Demos, author of "Obama's Challenge: America's Economic Crisis and the Power of a Transformative Presidency, 4/28/9, “Obama Has Amassed Enormous Political Capital, But He Doesn't Know What to Do with It,” <http://www.alternet.org/economy/138641/obama_has_amassed_enormous_political_capital,_but_he_doesn%27t_know_what_to_do_with_it/?page=entire>)

**We got a small taste of what a more radical break might feel like** when Obama briefly signaled with the release of Bush's torture memos that he might be open to further investigation of the Bush's torture policy, but then **backtracked** and quickly asked the Democratic leadership to shut the idea down. Evidently, Obama's political self wrestled with his constitutional conscience, and won. Civil libertarians felt a huge letdown, but protest was surprisingly muted.

Thus **the most important obstacle for seizing the moment to achieve enduring change:** Barack **Obama's conception of what it means to promote national unity.** Obama repeatedly declared during the campaign that he would govern as a consensus builder. He wasn't lying. However, there are two ways of achieving consensus. **One is to split the difference** with your political enemies and the forces obstructing reform. The other is to use presidential **leadership** to transform the political center and alter the political dynamics. In his first hundred days, **Obama** has done a little of both, but he **defaults to the politics of accommodation.**

**Controversial wins bleed momentum not build it.**

**Politico**, 1/20/**2010** (Obama's first year: What went wrong, p. http://dyn.politico.com/printstory.cfm?uuid=4DF829C9-18FE-70B2-A8381A971FA3FFC9)

Obama believed that early success would be self-reinforcing, building a powerful momentum for bold government action. This belief was the essence of the White House’s theory of the “big bang” — that success in passing a big stimulus package would lead to success in passing health care, which in turn would clear the way for major cap-and-trade environmental legislation and “re-regulation” of the financial services sector — all in the first year. This proved to be a radical misreading of the dynamics of power. The massive cost of the stimulus package and industry bailouts — combined with the inconvenient fact that unemployment went up after their passage — meant that Obama spent the year bleeding momentum rather than steadily increasing public confidence in his larger governing vision. That vision was further obscured for many Americans by the smoke from the bitter and seemingly endless legislative battle on Capitol Hill over health care.

**Winners lose – any major win is the quickest way to kill future proposals. The GOP will backlash**

**The Economist**, 2/16/**2011** (What’s the equilibrium here?, p. lexis)

The Obama administration's theory of policymaking amid divided government is a frustrating one. What most people want from the president is to lead. And leading, in this case, means giving a speech, getting behind some unpopular ideas, trying to change public opinion... But the White House has come to the conclusion that that type of leadership doesn't work. It believes that the **quickest way to kill a controversial proposal** in a polarized political system is to have the president endorse it. Once a high-profile proposal is associated with the White House, Republicans (correctly) view its passage as a **threat to their political fortunes**. That's why the Obama administration didn't endorse a payroll tax holiday until after the election, when it emerged as part of the tax deal. Endorsing it before the election would've "**poisoned the well**," one administration official told me after. Republicans would have had to attack it, and that would have made it impossible for them to endorse it later. The Obama administration may have a point here. Consider one item that the president has repeatedly, openly pushedinvestment in America's long-neglected intercity rail system. Republican governors are cancelling rail plans as fast as they can. Florida Governor Rick Scott just scrapped a Florida plan, despite the fact that the federal government was going to cover most of the capital costs, while private companies were offering to cover the rest in exchange for the right to operate the line. On the other hand, Mr Obama responded to Republican budget proposals that avoided addressing entitlements by...releasing a budget that avoided addressing entitlements. And lo and behold, Republican congressional leaders are now scrambling to include entitlement reforms in new budget plans. Maybe the president has this whole reverse psychology thing figured out. But I doubt this is a stable equilibrium. The GOP's reflexive **anti-Obama streak** is motivated, one presumes, by a desire to win elections. One supposes that they feel they must **deny him legislative victories** in order to be successful at the ballot box. So for a while, presidential abdication of leadership may create political space for something like honest legislative negotiations over policy. But a grand bargain that takes place under Mr Obama's watch is a **political victory** for Mr Obama, whether or not he led the charge. And the GOP is **unlikely to let the president have such a win**.

**Wins don’t spill over – empirically proven**

**Hertzberg**, 2/7/**2011** (Hendrik – senior editor and political essayist at the New Yorker, The New Yorker, p. http://www.newyorker.com/talk/comment/2011/02/07/110207taco\_talk\_hertzberg?printable=true)

Strong words. But now they are not even whispered. The climate bill, like hundreds of others less consequential, met its fate on the legislative terminal ward that is the United States Senate, where bleeding is still the treatment of choice. The bill died of complete organ failure, you might say. The contributing causes included the economic crisis, which made it easy to stoke fear; the power, money, and regional clout of sectors that benefit from the greenhouse-gas-producing status quo, especially the coal and oil industries; the Republican congressional leadership’s determination to forgo compromise in favor of a disciplined drive to block anything that might resemble a victory for Obama; the rise of the Tea Party right and the baleful influence of talk radio and Fox News; and, as always, the filibuster. But Obama and the White House cannot escape blame. They botched delicate negotiations in the Senate, were neglectful at key moments, and expended little of the courage, imagination, and resources they brought to health-care reform. Perhaps they calculated that winning health care would strengthen them for climate change, like Popeye after a helping of spinach. But the political effect, at least in its immediate manifestations, was more like Kryptonite.

**Winners win not true for Obama – must be large, popular and on economic issue**

**Kuttner 11** (Robert, co-founder and co-editor of The American Prospect, as well as a distinguished senior fellow of the think tank Demos, 5/16, http://prospect.org/cs/articles?article=barack\_obamas\_theory\_of\_power)

Obama won more legislative trophies during his first two years than Clinton did, but in many respects, they were poisoned chalices. Health reform proved broadly unpopular because of political missteps—a net negative for Democrats in the 2010 midterm. The stimulus, though valuable, was too small to be a major political plus. Obama hailed it as a great victory rather than pledging to come back for more until recovery was assured. He prematurely abandoned the fight for jobs as his administration’s central theme, though the recession still wracked the nation. And because of the administration’s alliance with Wall Street, Obama suffered both the appearance and reality of being too close to the bankers, despite a partial success on financial reform. Obama’s mortgage-rescue program was the worst of both worlds—it failed to deliver enough relief to make an economic difference yet still signaled politically disabling sympathy for both “deadbeat” homeowners and for bankers. (See this month’s special report on page A1.)

**Wins only build long-term capital – link outweighs**

**Purdum 10,** Columnist for Vanity Fair, (Todd, “Obama Is Suffering Because of His Achievements, Not Despite Them,” 12-20 [www.vanityfair.com/online/daily/2010/12/obama-is-suffering-because-of-his-achievements-not-despite-them.html](http://www.vanityfair.com/online/daily/2010/12/obama-is-suffering-because-of-his-achievements-not-despite-them.html))

With this weekend’s decisive Senate repeal of the military’s “Don’t Ask, Don’t Tell” policy for gay service members, can anyone seriously doubt Barack Obama’s patient willingness to play the long game? Or his remarkable success in doing so? In less than two years in office—often against the odds and the smart money’s predictions at any given moment—Obama has managed to achieve a landmark overhaul of the nation’s health insurance system; the most sweeping change in the financial regulatory system since the Great Depression; the stabilization of the domestic auto industry; and the repeal of a once well-intended policy that even the military itself had come to see as unnecessary and unfair. So why isn’t his political standing higher? Precisely because of the raft of legislative victories he’s achieved. Obama has pushed through large and complicated new government initiatives at a time of record-low public trust in government (and in institutions of any sort, for that matter), and he has suffered not because he hasn’t “done” anything but because he’s done so much—way, way too much in the eyes of his most conservative critics. **With each victory, Obama’s opponents grow more frustrated, filling the airwaves** and what passes for political discourse with fulminations about some supposed sin or another. Is it any wonder the guy is bleeding a bit? For his part, Obama resists the pugilistic impulse. To him, the merit of all these programs has been self-evident, and he has been the first to acknowledge that he has not always done all he could to explain them, sensibly and simply, to the American public. But Obama is nowhere near so politically maladroit as his frustrated liberal supporters—or implacable right-wing opponents—like to claim. He proved as much, if nothing else, with his embrace of the one policy choice he surely loathed: his agreement to extend the Bush-era income tax cuts for wealthy people who don’t need and don’t deserve them. That broke one of the president’s signature campaign promises and enraged the Democratic base and many members of his own party in Congress. But it was a cool-eyed reflection of political reality: The midterm election results guaranteed that negotiations would only get tougher next month, and a delay in resolving the issue would have forced tax increases for virtually everyone on January 1—creating nothing but uncertainty for taxpayers and accountants alike. Obama saw no point in trying to score political debating points in an argument he knew he had no chance of winning. Moreover, as The Washington Post’s conservative columnist Charles Krauthammer bitterly noted, Obama’s agreement to the tax deal amounted to a second economic stimulus measure—one that he could never otherwise have persuaded Congressional Republicans to support. Krauthammer denounced it as the “swindle of the year,” and suggested that only Democrats could possibly be self-defeating enough to reject it. In the end, of course, they did not. Obama knows better than most people that politics is the art of the possible (it’s no accident that he became the first black president after less than a single term in the Senate), and an endless cycle of two steps forward, one step back. So he just keeps putting one foot in front of the other, confident that he can get where he wants to go, eventually. The short-term results are often **messy and confusing**. Just months ago, gay rights advocates were distraught because Obama wasn’t pressing harder to repeal “Don’t Ask, Don’t Tell.” Now he is apparently paying a price for his victory because some Republican Senators who’d promised to support ratification of the START arms-reduction treaty—identified by Obama as a signal priority for this lame-duck session of Congress—are balking because Obama pressed ahead with repealing DADT against their wishes. There is a price for everything in politics, and Obama knows that, too.

**Political Capital Key – 2NC**

**Prefer issue specific evidence – 1NC \_\_\_\_ indicates that Obama’s use of political capital will help \_\_\_\_\_ becomes successful and is a critical factor**

**Presidential leadership shapes the agenda**

**Kuttner 11** (Robert, Senior Fellow – Demos and Co-editor – American Prospect, “Barack Obama's Theory of Power,” The American Prospect, 5-16, <http://prospect.org/cs/articles?article=barack_obamas_theory_of_power>)

As the political scientist Richard Neustadt observed in his classic work, Presidential Power, a book that had great influence on President John F. Kennedy, the essence of a president’s power is “the power to persuade.” Because our divided constitutional system does not allow the president to lead by commanding, presidents amass power by making **strategic choices** **about when to use** the latent authority of the presidency to move public and elite opinion and then use that added prestige as **clout to move Congress**. In one of Neustadt’s classic case studies, Harry Truman, a president widely considered a lame duck, nonetheless persuaded the broad public and a Republican Congress in 1947-1948 that the Marshall Plan was a worthy idea. As Neustadt and Burns both observed, though an American chief executive is weak by constitutional design, a president possesses **several points of leverage**. He can play an effective outside game, motivating and shaping public sentiment, making clear the differences between his values and those of his opposition, and using popular support to box in his opponents and move them in his direction. He can complement the outside bully pulpit with a nimble inside game, uniting his legislative party, bestowing or withholding benefits on opposition legislators, forcing them to take awkward votes, and using the veto. He can also enlist the support of interest groups to pressure Congress, and use media to validate his framing of choices. Done well, **all of this signals leadership that often moves the** public **agenda**.

**Political capital is finite and drives decision-making – key to agenda success**

**Schier 9**, Professor of Poliitcal Science at Carleton, (Steven, "Understanding the Obama Presidency," The Forum: Vol. 7: Iss. 1, Berkely Electronic Press, <http://www.bepress.com/forum/vol7/iss1/art10>)

In additional to formal powers, a president’s informal power **is situationally derived and highly variable**. Informal power is a function of the “**political capital**” presidents amass and deplete as they operate in office. Paul Light defines several components of political capital: party support of the president in Congress, public approval of the presidential conduct of his job, the President’s electoral margin and patronage appointments (Light 1983, 15). Richard Neustadt’s concept of a president’s “professional reputation” likewise figures into his political capital. Neustadt defines this as the “impressions in the Washington community about the skill and will with which he puts [his formal powers] to use” (Neustadt 1990, 185). In the wake of 9/11, George W. Bush’s political capital surged, and both the public and Washington elites granted him a broad ability to prosecute the war on terror. By the later stages of Bush’s troubled second term, beset by a lengthy and unpopular occupation of Iraq and an aggressive Democratic Congress, he found that his political capital had shrunk. Obama’s informal powers will prove variable, not stable, as is always the case for presidents. Nevertheless, he entered office with a formidable store of political capital. His solid electoral victory means he initially will receive high public support and strong backing from fellow Congressional partisans, a combination that will allow him much leeway in his presidential appointments and with his policy agenda. Obama probably enjoys the prospect of a happier honeymoon during his first year than did George W. Bush, who entered office amidst continuing controversy over the 2000 election outcome. Presidents usually employ power to disrupt the political order they inherit in order to reshape it according to their own agendas. Stephen Skowronek argues that “presidents disrupt systems, reshape political landscapes, and pass to successors leadership challenges that are different from the ones just faced” (Skowronek 1997, 6). Given their limited time in office and the hostile political alignments often present in Washington policymaking networks and among the electorate, presidents must force political change if they are to enact their agendas. In recent decades, Washington power structures have become more entrenched and elaborate (Drucker 1995) while presidential powers – through increased use of executive orders and legislative delegation (Howell 2003) –have also grown. The presidency has more powers in the early 21st century but also faces more **entrenched coalitions of interests, lawmakers, and bureaucrats** whose agendas often differ from that of the president. This is an invitation for an energetic president – and that seems to describe Barack Obama – to engage in major ongoing battles **to impose his preferences**.

**Presidents perceive their capital as finite – our theory is true in practice**

**Marshall and Prins 11**, BRYAN W. MARSHALL Miami University BRANDON C. PRINS University of Tennessee & Howard H. Baker, Jr. Center for Public Policy Power or Posturing? Policy Availability and Congressional Influence on U.S. Presidential Decisions to Use Force Presidential Studies Quarterly 41, no. 3 (September) 2011

We argue that the more important effect of Congress occurs because presidents **anticipate how the use of force** may affect the larger congressional environment in which they inevitably have to operate (Brulé, Marshall, and Prins 2010). It may be true that presidents consider the chances that Congress will react to a specific use of force with countervailing tools, but even more importantly they anticipate the likelihood that a foreign conflict may damage (or advantage) their political fortunes elsewhere—in essence, the presidential calculus to use force factors in how such actions might shape their ability to achieve legislative priorities. To be clear, presidents can and do choose **to use force and press for legislative initiatives** in Congress. Taking unilateral actions in foreign policy does not preclude the president from working the legislative process on Capitol Hill. However, **political capital is finite** so spending resources in one area lessens what the president can bring to bear in other areas. That is, presidents consider the congressional environment in their decision to use force because their success at promoting policy change in either foreign or domestic affairs is largely determined by their relationship with Congress. Presidents do not make such decisions devoid of calculations regarding congressional preferences and behavior or how such decisions may influence their ability to achieve legislative objectives. This is true in large part because presidential behavior is motivated by multiple goals that are intimately tied to Congress. Presidents place a premium on passing legislative initiatives. The passage of policy is integral to their goals of reelection and enhancing their place in history (Canes-Wrone 2001; Moe 1985). Therefore, presidents seek to build and protect their relationship with Congress.

**Prefer issue specific evidence**

**Jacobs and King 10**, University of Minnesota, Nuffield College, (Lawrence and Desmond, “Varieties of Obamaism: Structure, Agency, and the Obama Presidency,” Perspectives on Politics (2010), 8: 793-802)

Yet if presidential personality and **leadership** style come up short as primary explanations for presidential success and failure, this does not render them irrelevant. There is no need to accept the false choice between volition and structure—between explanations that reduce politics to personality and those that focus only on system imperatives and contradictions. The most satisfying explanations lie at the intersection of agency and structure—what we describe as structured agency. Presidents have opportunities to lead, but not under the circumstances they choose or control. These circumstances both restrict the parameters of presidential impact and **highlight the significance of presidential skill** in accurately identifying and exploiting opportunities. Indeed, Obama himself talks about walking this tightrope—exercising “ruthless pragmatism” in seizing opportunities for reform while accepting the limits and seeking to “bridge that gap between the status quo and what we know we have to do for our future”.12

# Rd 8 vs. Harvard DT (IFR’s)

## 1NC

### 1NC

#### Immigration reform will pass, but capital’s key

NYT 1/31

[New York Times, 1/31/12, http://www.nytimes.com/2013/02/01/us/politics/senators-look-at-07-failure-for-lessons-on-immigration.html?\_r=0]

As eight senators in a bipartisan group look ahead to a broad immigration overhaul, they are also looking back to 2006 and 2007 — the last time a major immigration measure was considered — as something of a reverse playbook. Lesson 1? “Make sure you get out there and define what you’re trying to do,” said former Senator Trent Lott, the Mississippi Republican who, in 2007, was the minority whip when his chamber’s immigration efforts imploded. “Don’t forget to pay attention to the message, and don’t let the media define what you’re trying to do.” It is a tip that Mr. Lott says he has communicated to the staff of Senator Marco Rubio, a Florida Republican involved in the current effort, and so far Mr. Rubio seems to be heeding the advice. In recent weeks, he has focused on conservative media powerhouses, tirelessly wooing influential voices on the right like Bill O’Reilly and Rush Limbaugh. “The outreach by Marco Rubio has been very positive,” Mr. Lott said. “He’s very good at explaining what he wants to do.” Getting out ahead by articulating their immigration principles, as the group did in a Monday news conference, is only one of the ways the senators hope to learn from the mistakes of the past. This time, they said, they are capitalizing on a promising political environment, using more conciliatory language, and trying to harness media outlets to their advantage. They also plan to move their legislation through the Judiciary Committee, a step not taken in 2007 and one that helped doom the bill, and are working more closely **with businesses and labor unions** to make sure the two can also reach a compromise. “Our timing is right,” said Richard J. Durbin of Illinois, the No. 2 Democrat in the Senate. “The election results are still fresh in the minds of my Republican colleagues and they don’t want to go through this again.” President George W. Bush said in 2009 that it was “a mistake” to have pushed for changes to Social Security, rather than immigration, immediately after the 2004 election. By the time he took on immigration late in his second term, he was a lame duck president, weakened by the war in Iraq and facing dissent within his party. “By his own admission, President Bush made a strategic error in not pushing the issue right after his re-election,” said Kevin Appleby, the director of migration policy at the United States Conference of Catholic Bishops. “President Obama is not making the same mistake. He still has a lot of political capital to spend.” In the wake of the 2012 presidential election, where Mr. Obama’s defeat of Mitt Romney came with the help of 71 percent of the Hispanic vote, **those on all sides** of the immigration effort believe the climate is ripe for another attempt. And, at least in the early stages, they are taking steps to reach across the aisle, even with the words they choose. “The most important lesson I took way from 2006 and 2007 is that people had no faith that there wouldn’t be future waves of illegal immigrants,” said Senator Charles E. Schumer, a Democrat of New York in the Senate’s bipartisan immigration group. To show that he is serious about an overhaul, he explained, he is especially conscious of the language he uses; Mr. Schumer now refers to “illegal immigrants,” a term preferred by the right and an acknowledgment that the 11 million illegal immigrants currently in the country did, in fact, break the law. In a similar linguistic concession, Mr. Rubio, during Monday’s immigration news conference, referred to the “undocumented” workers, a term generally preferred by Democrats and loathed by his party’s conservative wing. In 2007, in an attempt to save time and reach a deal, the Senate bypassed the Judiciary Committee and brought the legislation straight to the floor. At the time, the senators who drafted the bill tried to band together to vote down any amendments that changed the substance of their compromise, an agreement that broke down. Several controversial amendments, including one that then-Senator Obama supported, ultimately led to the bill’s collapse. “What we’re doing now is we’re going to put it through committee,” Mr. Schumer said. “When the bill gets through committee, it will be battle-tested and we will be prepared for the floor in a better way.” The group is also considering again trying to maintain **a large voting bloc**, to squash any amendments they believe could kill their bill. “I think we have to unless there’s something that we both agree to,” Senator John McCain, Republican of Arizona, said when asked about such a possibility at an immigration panel on Wednesday. “It’s going to be fragile, as these kinds of things are, and so we will have to take some tough votes in order to keep it intact.”

#### Plan unpopular

Korte, 12 (Gregory, “Politics stands in the way of nuclear plant's future”, USA Today, April 27, http://www.usatoday.com/money/industries/energy/story/2012-04-13/usec-centrifuges-loan-guarantees/54560118/1)

Three dozen 43-foot-tall centrifuges swirl quietly in a cavernous building in southern Ohio, ready to turn uranium hexafluoride into the enriched fuel that can power America's nuclear power plants. They stand like stacks of poker chips on a table — the ante for what could be a $2 billion national gamble on nuclear energy. Energy company USEC wants federal loan guarantees to allow it to build 11,000 centrifuges here, which would spin out enough fuel to power about three dozen nuclear power plants non-stop. But while plenty of politicians whose districts could benefit from the project support it, the Piketon plant remains stymied by a political standoff. Many Republicans who back the project — called the American Centrifuge Project — have savaged the Obama administration loan program that would pay for it, while the Obama Energy Department, burned by Republican criticism, has voiced tentative support for the plan but won't authorize federal money for it without congressional approval. For almost a year, congressional Republicans have criticized the administration's $535 million loan guarantee to now-bankrupt solar panel maker Solyndra. The administration, they say, is unfairly picking "winners and losers" in energy. Both sides say they want the project to move forward. Both support short-term "bridge" funding to keep the project going until the financing can be worked out. Both say the other side has to make the first move. **The stakes are high:** It's an election year, and Ohio is a swing state. USEC estimates the project at its peak will generate 3,158 jobs in Ohio, and 4,284 elsewhere. Pike County, home to the centrifuges, has a 13% unemployment rate — the highest in Ohio. The median household income is about $40,000. The average job at USEC pays $77,316.

**Solves the economy**

**Krudy, 13** (Edward, “Immigration reform seen boosting US economic growth,” January 29th, 2013, <http://www.nbcnews.com/business/economywatch/immigration-reform-seen-boosting-us-economic-growth-1C8159298>)

The sluggish U.S. economy could get a lift if President Barack Obama and a bipartisan group of senators succeed in what could be the biggest overhaul of the nation's immigration system since the 1980s. Relaxed immigration rules could encourage entrepreneurship, increase demand for housing, raise tax revenues and help reduce the budget deficit, economists said. By helping more immigrants enter the country legally and allowing many illegal immigrants to remain, the United States could help offset a slowing birth rate and put itself in a stronger demographic position than aging Europe, Japan and China. "Numerous industries in the United States can't find the workers they need, right now even in a bad economy, to fill their orders and expand their production as the market demands," said Alex Nowrasteh, an immigration specialist at the libertarian Cato Institute. The emerging consensus among economists is that immigration provides a net benefit. It increases demand and productivity, helps drive innovation and lowers prices, although there is little agreement on the size of the impact on economic growth. First Thoughts: Obama to embrace Senate immigration deal President Barack Obama plans to launch his second-term push for a U.S. immigration overhaul during a visit to Nevada on Tuesday and will make it a high priority to win congressional approval of a reform package this year, the White House said. The chances of major reforms gained momentum on Monday when a bipartisan group of senators agreed on a framework that could eventually give 11 million illegal immigrants a chance to become American citizens. Their proposals would also include means to keep and attract workers with backgrounds in science, technology, engineering and mathematics. This would be aimed both at foreign students attending American universities where they are earning advanced degrees and high-tech workers abroad. An estimated 40 percent of scientists in the United States are immigrants and studies show immigrants are twice as likely to start businesses, said Nowrasteh. Boosting legal migration and legalizing existing workers could add $1.5 trillion to the U.S. economy over the next 10 years, estimates Raul Hinojosa-Ojeda, a specialist in immigration policy at the University of California, Los Angeles. That's an annual increase of 0.8 percentage points to the economic growth rate, currently stuck at about 2 percent.

#### Prevents collapse

Ozimek 2-7 (Adam, Contributor, “Does An Aging Population Hurt The Economy?” Forbes, 2013, http://www.forbes.com/sites/modeledbehavior/2013/02/07/does-an-aging-population-hurt-the-economy/)

The economic benefit of immigration is in part about how big of a problem our aging population is. Immigrants are in general younger, and our best way to fight against a growing ratio of retirees to workers. But this raises the question of how big of a problem is this ratio and our aging population in general. While many are concerned about this, Dean Baker argues it is not a problem. He agrees that the ratio has increased and will continue to increase in the future as the population ages, but he argues that we haven’t seen any problems yet so we won’t see any later: We have already seen a sharp decline in the ratio of workers to retirees, yet even people who follow the economy and economic policy closely, like Klein, were apparently not even aware of this fact. Since this decline is never cited as factor causing our current economic problems, why would we think the comparatively mild decline in this ratio projected for future decades will be a large burden? Dean is wrong that the ratio of workers to retirees is not cited as a factor in the current economic problems. The most prominent example comes from newly appointed Council of Economic Advisors member James Stock and his co-author Mark Watson. In their paper “Disentangling the Channels of the 2007-2009 Recession” they specifically cite demographic trends as a cause of our slow recovery. The variable Stock and Watson ultimately cite is the decline in labor force participation, and they argue it is driven by the aging of the workforce and the overall distribution of workers by age. Dean may argue that this technically isn’t the dependency ratio, but that would be quibbling: changes in these two measures capture the same basic economic phenomenon of the aging population and a lower percentage of the population working. Not only has the aging population contributed to the slow recovery, Stock and Watson argue there is good reason to believe it will mean slow recoveries in the future too: The main conclusion from this demographic work is that, barring a new increase in female labor force participation or a significant increase in the growth rate of the population, these demographic factors point towards a further decline in trend growth of employment and hours in the coming decades. Applying this demographic view to recessions and recoveries suggests that the future recessions with historically typical cyclical behavior will have steeper declines and slower recoveries in output and employment. Furthermore, this is just the impact of the aging population on business cycles, there is also the very serious problem of how it will affect our finances. Dean knows that by increasing the workforce immigration improves Social Security’s finances. In 2006 he wrote that if future immigration was at 2001-2002 levels instead of at around 900,000 per year it would reduce the Social Security trust fund’s long-term shortfall by 12%. A shortfall means we will reduce benefits or pay for it in higher taxes, and either are going to result in lower welfare for someone.

**Causes nuclear war, turns warming and heg**

O’Hanlon 12 — Kenneth G. Lieberthal, Director of the John L. Thornton China Center and Senior Fellow in Foreign Policy and Global Economy and Development at the Brookings Institution, former Professor at the University of Michigan, served as special assistant to the president for national security affairs and senior director for Asia on the National Security Council, holds a Ph.D. from Columbia University, and Michael E. O'Hanlon, Director of Research and Senior Fellow in Foreign Policy at the Brookings Institution, Visiting Lecturer at Princeton University, Adjunct Professor at Johns Hopkins University, holds a Ph.D. from Princeton University, 2012 (“The Real National Security Threat: America's Debt,” *Los Angeles Times*, July 10th, Available Online at http://www.brookings.edu/research/opinions/2012/07/10-economy-foreign-policy-lieberthal-ohanlon, Accessed 07-12-2012)

Lastly, American economic weakness undercuts U.S. leadership abroad. Other countries sense our weakness and wonder about our purported decline. If this perception becomes more widespread, and the case that we are in decline becomes more persuasive, countries will begin to take actions that reflect their skepticism about America's future. Allies and friends will doubt our commitment and may pursue nuclear weapons for their own security, for example; adversaries will sense opportunity and be less restrained in throwing around their weight in their own neighborhoods. The crucial Persian Gulf and Western Pacific regions will likely become less stable. Major war will become more likely. When running for president last time, Obama eloquently articulated big foreign policy visions: healing America's breach with the Muslim world, controlling global climate change, dramatically curbing global poverty through development aid, moving toward a world free of nuclear weapons. These were, and remain, worthy if elusive goals. However, for Obama or his successor, there is now a much more urgent big-picture issue: restoring U.S. economic strength. Nothing else is really possible if that fundamental prerequisite to effective foreign policy is not reestablished.

### 1NC

#### Energy security militarizes energy – justifies intervention and causes serial policy failure

Ciuta 10 -- Lecturer in International Relations and Director of the Centre of European Politics, School of Slavonic and East European Studies @ University College London, UK (Felix, 2010, "Conceptual Notes on Energy Security: Total or Banal Security?" Security Dialogue 41(123), Sage)

Even casual observers will be familiar with the argument that energy is a security issue because it is either a cause or an instrument of war or conflict. Two different strands converge in this logic of energy security. The first strand focuses on energy as an instrument: energy is what states fight their current wars with. We can find here arguments regarding the use of the ‘energy weapon’ by supplier states (Belkin, 2007: 4; Lugar, 2006: 3; Winstone, Bolton & Gore, 2007: 1; Yergin, 2006a: 75); direct substitutions in which energy is viewed as the ‘equivalent of nuclear weapons’ (Morse & Richard, 2002: 2); and rhetorical associations that establish policy associations, as exemplified by the panel ‘Guns and Gas’ during the Transatlantic Conference of the Bucharest NATO Summit. The second strand comes from the literature on resource wars, defined as ‘hot conflicts triggered by a struggle to grab valuable resources’ (Victor, 2007: 1). Energy is seen as a primary cause of greatpower conflicts over scarce energy resources (Hamon & Dupuy, 2008; Klare, 2001, 2008). Alternatively, energy is seen as a secondary cause of conflict; here, research has focused on the dynamics through which resource scarcity in general and energy scarcity in particular generate socio-economic, political and environmental conditions such as population movements, internal strife, secessionism and desertification, which cause or accelerate both interstate and intrastate conflict (Homer-Dixon, 1991, 1994, 2008; Solana, 2008; see also Dalby, 2004). As is immediately apparent, this logic draws on a classic formulation that states that ‘a nation is secure to the extent to which it is not in danger of having to sacrifice core values, if it wishes to avoid war, and is able . . . to maintain them by victory in such a war’ (Lippmann, 1943: 51). The underlying principle of this security logic is survival: not only surviving war, but also a generalized quasi-Darwinian logic of survival that produces wars over energy that are fought with ‘energy weapons’. At work in this framing of the energy domain is therefore a definition of security as ‘the absence of threat to acquired values’ (Wolfers, 1952: 485), more recently reformulated as ‘survival in the face of existential threats’ (Buzan, Wæver & de Wilde, 1998: 27). The defining parameters of this traditional security logic are therefore: (1) an understanding of security focused on the use of force, war and conflict (Walt, 1991: 212; Freedman, 1998: 48); and (2) a focus on states as the subjects and objects of energy security. In the war logic, energy security is derivative of patterns of international politics – often captured under the label ‘geopolitics’ (Aalto & Westphal, 2007: 3) – that lend their supposedly perennial attributes to the domain of energy (Barnes, Jaffe & Morse, 2004; Jaffe & Manning, 1998). The struggle for energy is thus subsumed under the ‘normal’ competition for power, survival, land, valuable materials or markets (Leverett & Noël, 2007). A key effect of this logic is to ‘arrest’ issues usually not associated with war, and thus erase their distinctive characteristics. Even the significance of energy qua energy is abolished by the implacable grammar of conflict: energy becomes a resource like any other, which matters insofar as it affects the distribution of capabilities in the international system. As a result, a series of transpositions affect most of the issues ranked high on the energy security agenda. For example, in the European context, the problem is not necessarily energy (or, more precisely, gas, to avoid the typical reduction performed by such accounts). The problem lies in the ‘geopolitical interests’ of Russia and other supplier states, whose strength becomes inherently threatening (Burrows & Treverton, 2007; Horsley, 2006). Energy security policies become entirely euphemistic, as illustrated for example by statements that equate ‘avoiding energy isolation’ with ‘beating Russia’ (Baran, 2007). Such ‘geopolitical’ understanding of international politics also habituates a distinct vocabulary. Public documents, media reports and academic analyses of energy security are suffused with references to weapons, battles, attack, fear, ransom, blackmail, dominance, superpowers, victims and losers. It is therefore unsurprising that this logic is coterminous with the widely circulating narrative of the ‘new’ Cold War. This lexicon of conflict encourages modulations, reductions and transpositions in the meanings of both energy and security. This is evident at the most fundamental level, structuring encyclopaedic entries (Kohl, 2004) and key policy documents (White House, 2007), where energy security becomes oil security (security modulates energy into oil), which becomes oil geopolitics (oil modulates security into geopolitics). Once security is understood in the grammar of conflict, the complexity of energy is abolished and reduced to the possession of oilfields or gas pipelines. The effect of this modulation is to habituate the war logic of security, and also to create a hierarchy between the three constitutive dimensions of energy security (growth, sustenance and the environment). This hierarchy reflects and at the same time embeds the dominant effect of the war logic, which is the militarization of energy (Russell & Moran, 2008), an argument reminiscent of the debates surrounding the securitization of the environment (Deudney, 1990). It is of course debatable whether this is a new phenomenon. Talk of oil wars has been the subject of prestigious conferences and conspiracy theories alike, and makes the headlines of newspapers around the world. A significant literature has long focused on the relationship between US foreign policy, oil and war (Stokes, 2007; in contrast, see Nye, 1982). The pertinence of this argument cannot be evaluated in this short space, but it is worth noting that it too reduces energy to oil, and in/security to war. The key point is that this logic changes not only the vocabulary of energy security but also its political rationality. As Victor (2008: 9) puts it, this signals ‘the arrival of military planning to the problem of natural resources’ and inspires ‘a logic of hardening, securing and protecting’ in the entire domain of energy. There is, it must be underlined, some resistance to the pull of the logic of war, as attested for example by NATO’s insistence that its focus on energy security ‘will not trigger a classical military response’ (De Hoop Scheffer, 2008: 2). Yet, the same NATO official claims that ‘the global competition for energy and natural resources will re-define the relationship between security and economics’, which hints not only at the potential militarization of energy security policy but also at the hierarchies this will inevitably create. New geographies of insecurity will thus emerge if the relationship between the environment, sustenance and growth is structured by the militarized pursuit of energy (Campbell, 2005: 952; Christophe Paillard in Luft & Paillard, 2007).

**Enframing of national security is a pre-requisite to macropolitical violence**

**Burke 7** (Anthony, Senior Lecturer in Politics and International Relations at UNSW, Sydney, “Ontologies of War: Violence, Existence and Reason”, Theory and Event, 10.2, Muse)

My argument here, whilst normatively sympathetic to Kant's moral demand for the eventual abolition of war, militates against excessive optimism.86 Even as I am arguing that war is not an enduring historical or anthropological feature, or a neutral and rational instrument of policy -- that it is rather the **product of hegemonic forms of knowledge** about political action and community -- my analysis does suggest some sobering conclusions about its power as an idea and formation. Neither the progressive flow of history nor the pacific tendencies of an international society of republican states will save us. The violent ontologies I have described here in fact dominate the conceptual and policy frameworks of modern republican states and have come, against everything Kant hoped for, to stand in for progress, modernity and reason. Indeed what Heidegger argues, I think with some credibility, is that the enframing world view has come to stand in for being itself. Enframing, argues Heidegger, 'does not simply endanger man in his relationship to himself and to everything that is...it drives out every other possibility of revealing...the rule of Enframing threatens man with the possibility that it could be denied to him to enter into a more original revealing and hence to experience the call of a more primal truth.'87 What I take from Heidegger's argument -- one that I have sought to extend by analysing the militaristic power of modern ontologies of political existence and security -- is a view that the challenge is posed not merely by a few varieties of weapon, government, technology or policy, but by an overarching system of thinking and understanding that lays claim to our entire space of truth and existence. Many of the **most destructive features of contemporary modernity** -- militarism, repression, coercive diplomacy, covert intervention, geopolitics, economic exploitation and ecological destruction -- derive not merely from particular choices by policymakers based on their particular interests, but from calculative, 'empirical' discourses of scientific and political truth rooted in powerful enlightenment images of being. Confined within such an epistemological and cultural universe, **policymakers' choices become necessities**, their actions become inevitabilities, and humans suffer and die. Viewed in this light, 'rationality' is the name we give the chain of reasoning which builds one structure of truth on another until a course of action, however violent or dangerous, becomes preordained through that reasoning's very operation and existence. It creates both discursive constraints -- available choices may simply not be seen as credible or legitimate -- and material constraints that derive from the mutually reinforcing cascade of discourses and events which then preordain militarism and violence as necessary policy responses, however ineffective, dysfunctional or chaotic. The force of my own and Heidegger's analysis does, admittedly, tend towards a deterministic fatalism. On my part this is quite deliberate; it is important to allow this possible conclusion to weigh on us. Large sections of modern societies -- especially parts of the media, political leaderships and national security institutions -- are utterly trapped within the Clausewitzian paradigm, within the instrumental utilitarianism of 'enframing' and the stark ontology of the friend and enemy. They are certainly tremendously aggressive and energetic in continually stating and reinstating its force. But is there a way out? Is there no possibility of agency and choice? Is this not the key normative problem I raised at the outset, of how the modern ontologies of war efface agency, causality and responsibility from decision making; the responsibility that comes with having choices and making decisions, with exercising power? (In this I am much closer to Connolly than Foucault, in Connolly's insistence that, even in the face of the anonymous power of discourse to produce and limit subjects, selves remain capable of agency and thus incur responsibilities.88) There seems no point in following Heidegger in seeking a more 'primal truth' of being -- that is to reinstate ontology and obscure its worldly manifestations and consequences from critique. However we can, while refusing Heidegger's unworldly89 nostalgia, appreciate that he was searching for a way out of the modern system of calculation; that he was searching for a 'questioning', 'free relationship' to technology that would not be immediately recaptured by the strategic, calculating vision of enframing. Yet his path out is somewhat chimerical -- his faith in 'art' and the older Greek attitudes of 'responsibility and indebtedness' offer us valuable clues to the kind of sensibility needed, but little more. When we consider the problem of policy, the force of this analysis suggests that choice and agency can be all too often limited; they can remain confined (sometimes quite wilfully) within the overarching strategic and security paradigms. Or, more hopefully, policy choices could aim to bring into being a more enduringly inclusive, cosmopolitan and peaceful logic of the political. But this cannot be done without seizing alternatives from outside the space of enframing and utilitarian strategic thought, by being aware of its presence and weight and activating a very different concept of existence, security and action.90 This would seem to hinge upon 'questioning' as such -- on the questions we put to the real and our efforts to create and act into it. Do security and strategic policies seek to exploit and direct humans as material, as energy, or do they seek to protect and enlarge human dignity and autonomy? Do they seek to impose by force an unjust status quo (as in Palestine), or to remove one injustice only to replace it with others (the U.S. in Iraq or Afghanistan), or do so at an unacceptable human, economic, and environmental price? Do we see our actions within an instrumental, amoral framework (of 'interests') and a linear chain of causes and effects (the idea of force), or do we see them as folding into a complex interplay of languages, norms, events and consequences which are less predictable and controllable?91 And most fundamentally: Are we seeking to coerce or persuade? Are less violent and more sustainable choices available? Will our actions perpetuate or help to end the global rule of insecurity and violence? Will our thought?

**Altenative – reject the affirmative’s security discourse – only resistance can generate genuine political thought**

**Neoclous 8 –** Mark Neocleous, Prof. of Government @ Brunel, 2008 [Critique of Security, 185-6]

The only way out of such a dilemma, to escape the fetish, is perhaps **to eschew the logic of security altogether** - to reject it as so ideologically loaded in favour of the state that any real political thought other than the authoritarian and reactionary should be pressed to give it up. That is clearly something that can not be achieved within the limits of bourgeois thought and thus could never even begin to be imagined by the security intellectual. It is also something that the constant iteration of the refrain 'this is an insecure world' and reiteration of one fear, anxiety and insecurity after another will also make it hard to do. But it is something that the critique of security suggests we may have to consider if we want a political way out of the impasse of security. This impasse exists because security has now become so all-encompassing that it **marginalises all else, most notably** the constructive conflicts, **debates** and discussions **that animate political life.** The constant prioritising of a mythical security as a political end - as the political end constitutes a rejection of politics in any meaningful sense of the term. That is, as a mode of action in which differences can be articulated, in which the conflicts and struggles that arise from such differences can be fought for and negotiated, in which people might come to believe that another world is possible - that they might transform the world and in turn be transformed. Security politics simply removes this; worse, it remoeves it while purportedly addressing it. In so doing it suppresses all issues of power and turns political questions into debates about the most efficient way to achieve 'security', despite the fact that we are never quite told - never could be told - what might count as having achieved it. Security politics is, in this sense, an anti-politics,"' dominating political discourse in much the same manner as the security state tries to dominate human beings, reinforcing security fetishism and the monopolistic character of security on the political imagination. We therefore need to get beyond security politics, not add yet more 'sectors' to it in a way that simply expands the scope of the state and legitimises state intervention in yet more and more areas of our lives. Simon Dalby reports a personal communication with Michael Williams, co-editor of the important text Critical Security Studies, in which the latter asks: if you take away security, what do you put in the hole that's left behind? But I'm inclined to agree with Dalby: **maybe there is no hole**."' The mistake has been to think that there is a hole and that this hole needs to be filled with a new vision or revision of security in which it is re-mapped or civilised or gendered or humanised or expanded or whatever. All of these ultimately remain within the statist political imaginary, and consequently end up reaffirming the state as the terrain of modern politics, the grounds of security. The real task is not to fill the supposed hole with yet another vision of security, but to fight for an **alternative political language** which takes us beyond the narrow horizon of bourgeois security and which therefore does not constantly throw us into the arms of the state. That's the point of critical politics: to develop a new political language more adequate to the kind of society we want. Thus while much of what I have said here has been of a negative order, part of the tradition of critical theory is that the negative may be as significant as the positive in setting thought on new paths. For if security really is the supreme concept of bourgeois society and the fundamental thematic of liberalism, then to keep harping on about insecurity and to keep demanding 'more security' (while meekly hoping that this increased security doesn't damage our liberty) is to **blind ourselves** to the possibility of building real alternatives to the authoritarian tendencies in contemporary politics. To situate ourselves against security politics would allow us to circumvent the debilitating effect achieved through the constant securitising of social and political issues, debilitating in the sense that 'security' helps consolidate the power of the existing forms of social domination and justifies the short-circuiting of even the most democratic forms. It would also allow us to forge another kind of politics centred on a **different conception of the good.** We need a new way of thinking and talking about social being and politics that moves us beyond security. This would perhaps be emancipatory in the true sense of the word. What this might mean, precisely, must be open to debate. But it certainly requires recognising that security is an illusion that has forgotten it is an illusion; it requires recognising that security is not the same as solidarity; it requires accepting that insecurity is part of the human condition, and thus giving up the search for the certainty of security and instead learning to tolerate the uncertainties, ambiguities and 'insecurities' that come with being human; it requires accepting that 'securitizing' an issue does not mean dealing with it politically, but **bracketing it out** and handing it to the state; **it requires us to be brave enough to return the gift."'**

### 1NC

#### The United States Federal Government should provide initial funding for commercial Integral Fast Reactors in the United States that is variable based on changes in performance, price, and cost. The incentives should be terminated if the technology fails to reach the price and performance benchmarks. We’ll clarify.

#### The CP solves the case and promotes innovation

**Jenkins et. al**, April **2012** (Jesse – Director of Energy and Climate Policy at the Breakthrough Institute, and Mark Muro – Senior Fellow at the Metropolitan Policy Program in the Brookings Institution, Ted Nordhaus – cofounder of the Breakthrough Institute, Michael Shellenberger – cofounder of the Breakthrough Institute, Letha Tawney – Senior Associate at the World Resources Institute, and Alex Trembath – Policy Associate at the Breakthrough Institute, Beyond Boom & Bust: Putting Clean Tech on a Path to Subsidy Independence, p. 38-39)

In particular, many of today’s clean tech deployment subsidies and policies should be reformed to ensure they: → ESTABLISH A COMPETITIVE MARKET. Deployment policies should create market opportunities for advanced clean energy technologies while fostering competition between technology firms. → DRIVE COST REDUCTIONS AND PERFORMANCE IMPROVEMENTS. Deployment policies should create market incentives and structures that demand and reward continual improvement in technology performance and cost. → PROVIDE TARGETED AND TEMPORARY SUPPORT FOR MATURING TECHNOLOGIES. Deployment policies must not operate in perpetuity, but rather provide targeted and temporary support for clean tech segments that are still maturing and improving. Incentives should be terminated if technology segments either fail to improve in price and performance or become competitive without subsidy. → REDUCE SUBSIDY LEVELS IN RESPONSE TO CHANGING TECHNOLOGY COSTS. Deployment incentives should decline as technologies **improve in price and performance** to both conserve limited taxpayer and consumer resources and provide clear incentives for continued technology improvement. → AVOID TECHNOLOGY LOCK-OUT AND PROMOTE A DIVERSE ENERGY PORTFOLIO. Deployment incentives should be structured to create market opportunities for energy technologies at various levels of maturity, including new market entrants, to ensure that each has a chance to mature while allowing technologies of similar maturity levels to compete amongst themselves.97 More expensive technologies that are still nascent and have the technical potential to develop into low-cost, high-performance energy sources should not be locked out of markets by more mature clean technologies that have had the benefit of more time to reduce costs. A diverse energy portfolio will strengthen America’s energy security and encourage greater market competition. → PROVIDE SUFFICIENT BUSINESS CERTAINTY. While deployment incentives should be temporary, they must provide sufficient certainty to support key business decisions by private firms and investors. The process for reducing subsidies and the schedule for support should be clear, transparent, and planned over a multi-year horizon. Several policies could be structured to meet these criteria. Competitive deployment incentives could be created for various clean tech segments of similar maturity, with incentives for each segment falling steadily over time to demand and reward continual innovation and price improvements.99 Steadily improving performance-based standards could create both market demand and spur consistent technology improvement.100 Such incentives or performance standards could also be set competitively by “top-runners,” the leading industry performers in each market segment, **forcing other firms to steadily innovate to stay competitive** in the market.101 Demanding federal procurement opportunities could be created to drive both market opportunities and ensure steady improvement of each successive generation of product, particularly when clean tech products align with strategic military needs.102 And where direct government procurement does not make sense, reverse auction incentives could be established for varying technologies to drive industry competition and innovation.103 If structured to adhere to these criteria, a new era of clean tech deployment policies will neither select “winners and losers” a priori nor create permanently subsidized industries. Rather, these policies will provide opportunities for all emerging clean energy technologies to demonstrate progress in price and performance , foster competitive markets within a diverse energy portfolio, and put clean tech segments on track to full subsidy independence.

#### Avoids politics

The New York Times, 5/5/**2012** (The End of Clean Energy Subsidies?, p. http://www.nytimes.com/2012/05/06/opinion/sunday/the-end-of-clean-energy-subsidies.html?\_r=2)

This alarming news is contained in a new report from experts at the Brookings Institution, the World Resources Institute and the Breakthrough Institute. It is a timely effort to attach real numbers to an increasingly politicized debate over energy subsidies. While Mr. Obama is busily defending subsidies, the Republicans have used the costly market failure of one solar panel company, Solyndra, to indict the entire federal effort to encourage nascent technologies. The Republican assault obscures real successes that simply would not have been possible without government help. Wind power is a case in point. By spurring innovation and growth, a federal production tax credit for wind amounting to 2.2 cents per kilowatt-hour has brought the cost of electricity from wind power to a point where it is broadly competitive with natural gas, sustaining 75,000 jobs in manufacturing, installation and maintenance. But the tax credit is scheduled to expire at the end of this year, with potentially disastrous results: a 75 percent reduction in new investment and a significant drop in jobs. That is just about what happened the last time the credit was allowed to lapse, at the end of 2003. This is clearly the wrong time to step away from subsidies. But it may be the right time, the report says, to institute reforms, both to make the programs more effective and to make them more salable to budget hawks. One excellent proposal is to make the subsidies long term (ending the present boom or bust cycles) but rejigger them to **reward lower costs and better performance**. The idea is not to prop up clean tech industries forever. It is to get them to a point where they can stand on their own — an old-fashioned notion that, one would hope, might appeal even to House Republicans.

### 1NC

#### DOE will block natural gas exports – but demand shifts can change this

Ebinger et al 12 (Charles, Senior Fellow and Director of the Energy Security Initiative – Brookings, Kevin Massy, Assistant Director of the Energy Security Initiative – Brookings, and Govinda Avasarala, Senior Research Assistant in the Energy Security Initiative – Brookings, “Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas,” Brookings Institution, Policy Brief 12-01, http://www.brookings.edu/~/media/research/files/reports/2012/5/02%20lng%20exports%20ebinger/0502\_lng\_exports\_ebinger.pdf)

From the perspective of the U.S. federal government, the issue of implications is viewed in terms of “public interest.” Under existing legislation, exports of natural gas to countries with a free trade agreement (FTA) with the United States are, by law, deemed to be in the public interest and authorization is required to be given without modification or delay. Projects looking for authorization to export LNG to countries without an FTA, which account for roughly 96 percent of current global LNG demand, are required to be approved by the Secretary of Energy unless, after public hearing, the Department of Energy finds that such exports are not in the public interest. 80 Although the legal definition of “public interest” is not explicitly given in existing legislation, according to public statements by officials from the Department of Energy, “public interest” includes:

• Adequate domestic natural gas supply;

• Domestic demand for natural gas proposed for export; Economic impacts of exports (on GDP, consumers, and industry); • U.S. energy security; • Job creation; • U.S. balance of trade; • International considerations; • Environmental considerations; • Consistency with DoE’s policy of promoting market competition through free negotiation of trade 81 The first two of these criteria were addressed in Part I. The remainder focus on the various domestic and international implications of U.S. LNG exports. domestic implications The domestic implications of U.S. LNG exports include their impact on natural gas prices, natural gas price volatility, jobs and competitiveness, and on overall energy security. Price of domestic natural Gas The domestic price impact of natural gas exports will be a significant factor in determining whether or not the United States should export LNG. While it is generally acknowledged that a domestic price increase will result from largescale LNG exports, the size of the price increase is the subject of debate, with a number of studies suggesting a range of possible outcomes. The important considerations when analyzing the results and conclusions of the various existing studies are the assumptions and models that are used when making price forecasts. Below are the results and methodologies of five major pricing studies done by the EIA and three consultancies: Deloitte, ICF International, and Navigant Consulting, which published two studies. 2012 Energy information Administration study In January 2012, the EIA published a study entitled “Effect of Increased Natural Gas Exports on Domestic Energy Markets.” 82 The study, conducted at the request of the Office of Fossil Energy of the Department of Energy, analyzed four different export scenarios across four different resource base or economic assumptions to project price responses to LNG exports. In addition to a “baseline” scenario, where no LNG is exported, the EIA model considered four different export scenarios: • A low export/slow growth scenario, where 6 bcf/day of LNG is exported, phased in at a rate of 1 bcf/day per year; • A low export/rapid growth scenario, where 6 bcf/day of LNG is exported, phased in at a rate of 3 bcf/day per year; • A high export/slow growth scenario, where 12 bcf/day of LNG is exported, phased in at a rate of 1 bcf/day per year; • A high export/rapid growth scenario, where 12 bcf/day of LNG is exported, phased in at a rate of 3 bcf/day per year Given the uncertainty over the actual size of the shale gas resource base and the future growth of the U.S. economy, each of these scenarios (both “baseline” and export) were applied to four alternate background cases: • A reference case, based on the EIA’s 2011 Annual Energy Outlook; • A low-shale estimated ultimate recovery (EUR) case, in which shale gas production from new, undrilled wells is 50 percent below the reference case scenario; • A high-shale EUR case, in which shale gas production from new, undrilled wells is 50 percent higher than the reference case; • A high economic growth case, in which U.S. GDP grows at 3.2 percent as opposed to the 2.7 percent assumed in the reference case. Given the range of assumptions, the range of results was unsurprisingly wide. The results range from a 9.6 percent increase (from $3.56 to $3.90/ mcf) in domestic natural gas prices in 2025 due to exports (in the case of high shale gas recovery, low export volumes and a slow rate of export growth) to a 32.5 percent increase (in the case of low shale gas recovery, high export volumes and a high rate of export growth). The percentage premium for domestic natural gas prices in 2025 for each scenario relative to the baseline scenario price estimate is detailed in table 3. In addition to the price premium for exporting natural gas that exists in each case, the EIA study projected a short-term spike in natural gas prices as a result of LNG exports. As figure 7 below illustrates, in 2015, the first year that LNG exports occur, domestic natural gas prices rise rapidly until total export capacity is reached. In the “lowrapid” scenario prices peak in 2016, after the 6 bcf/day of export capacity is built over 2 years; in the “high-slow” scenario, natural gas prices peak in 2026, after the 12 bcf/day of export capacity is built over 12 years. The immediate jump in price becomes more pronounced in the scenarios where LNG export capacity increases quickly. In the “low-rapid” scenario, the price of natural gas peaks at nearly 18 percent above the baseline case; in the “high-rapid” scenario, natural gas prices peak at 36 percent above the baseline case. This price impact is exacerbated in the Low Shale EUR and High Macroeconomic Growth cases, as LNG exports further tighten domestic natural gas markets. In the most extreme example, the high-rapid scenario for exports in a Low Shale EUR case, the price for natural gas peaks at more than 50 percent than the baseline case. 83 There are two factors that should be considered when interpreting the results of this price impact study. The first is the assumption regarding the rate at which LNG could be exported. The results of EIA’s analysis represent an extreme scenario for LNG exports. In the existing LNG market, it is particularly unlikely that either the “low-rapid” or the “high-rapid” scenarios would materialize. The former assumption stipulates that the United States would export 6 bcf/day of LNG by 2016. Given that, at the time of writing, only one facility has been approved to export 2.2 bcf/day to nonFTA countries starting in 2015, it is unlikely that another three plants would be approved and built in such a short time frame. 84 The latter scenario, that the United States would be exporting 12 bcf/ day of LNG by 2018, suggests that in the next several years, the United States would grow from exporting negligible volumes of LNG to having roughly one-third of the global LNG export capacity. Not only would this supply growth outpace growth in global LNG demand, but this capacity addition would also have to compete with roughly 11 bcf/day of Australian-origin LNG that is expected to hit the market around the same time. 85 The second issue is the model’s assumptions for incremental investment in natural gas production as a result of increased export capacity. The spike in price depicted in figure 7 occurs because investment from gas producers lags additional demand. In the model, producers respond to, rather than anticipate, additional demand. For this reason, prices peak once the export capacity is filled, before steadily decreasing. In reality, the expectation of future demand would likely induce gas producers to invest in additional production before incremental demand occurs. As a result, the increase in prices would likely begin earlier and peak at a lower level than suggested by the model. deloitte study An earlier study released in November 2011 from the Deloitte Center for Energy Solutions highlighted the producer-response in its model. In addition to finding that LNG exports would produce a smaller increase in gas prices than the EIA report suggests, the Deloitte study points out that “producers can develop more reserves in anticipation of demand growth, such as LNG exports. There will be ample notice and time in advance of the exports to make supplies available.” 86 Using a dynamic model, in which production increased in anticipation of new demand, the Deloitte study found that 6 bcf/day of exports of LNG would result in, on average, a 1.7 percent increase (from $7.09 to $7.21/MMBtu) in the price of natural gas between 2016 and 2035. Further, the Deloitte study noted that there would be regional variations to the increase in natural gas prices resulting from LNG exports. As most of the proposed liquefaction terminals are expected to be on the Gulf Coast, the price of Henry Hub gas, which is the key benchmark for natural gas from the Gulf Coast, will increase by $0.22/ MMBtu by 2035 as a result of U.S. LNG exports. This is more than double the price increase projected in regions further away from the LNG export terminals. In New York and Illinois, natural gas prices are projected to increase by less than $0.10/MMBtu. This is particularly important in the Northeast, which historically experiences some of the highest natural gas prices in the country, but will benefit from the development and consumption of natural gas from the nearby Marcellus shale play. other studies Three other studies of note have analyzed the price impacts of U.S. LNG exports. In August 2010, Navigant Consulting found that 2 bcf/day of LNG exports would cause a price increase of between 7 and 7.9 percent from 2015 to 2035 relative to a scenario with no gas exports. ICF International found in August 2011 that 6 bcf/day of exports would result in an 11 percent ($0.64/MMBtu) increase in natural gas prices over the same period. 87 More recently, Navigant released another study that analyzed the impact of two separate export scenarios. The first scenario modeled the impact of 3.6 bcf/day of LNG exports from three terminals in North America: Sabine Pass in Louisiana, Kitimat in British Columbia, and Coos Bay in Oregon. The second scenario modeled the impact of 6.6 bcf/day of LNG exports from the three aforementioned export projects and 2 bcf/day of added exports from the Gulf Coast and 1 bcf/day from Maryland. 88 This Navigant study found that 6.6 bcf/day of LNG exports would result in a 6 percent ($0.35/MMBtu) increase in natural gas prices from 2015 to 2035. As with the EIA and Deloitte studies, the results of both Navigant and ICF’s studies must be analyzed in the context of their respective methodologies and assumptions. Navigant’s first study uses a more static supply model, which, unlike dynamic supply models, does not fully take account of the effect that higher prices have on spurring additional production. As a result, it takes a conservative estimate of supply growth potential. The report acknowledges that the price outcomes modeled in its analysis “establish the upper range of impacts that exports […] might have on natural gas prices.” 89 This study also did not factor in the reemergence of the industrial sector as a major consumer of natural gas following the shale gas “revolution.” The study assumes that natural gas consumption by the industrial sector will decline by 0.3% per year to 2035. By contrast, the EIA model assumes that industrial sector demand will increase by roughly 1% per year over the same period. 90 The ICF study factors in various levels of production response from an increase in price. Under its 6 bcf/day export scenario, the price impact ranges from a $0.52/ MMBtu increase in a more responsive drilling activity scenario to a $0.75/MMBtu increase in a less responsive drilling activity scenario. which study is right? Given that these studies forecast natural gas prices two decades into the future, it is difficult to determine which study is most accurate. (table 4 shows a comparison of the price impact forecasts of the various models.) However, policymakers would benefit from having a better understanding of the results that are generated from each report. This includes choosing the most relevant results from each report. For instance, following the release of the EIA study, many commentators were quick to highlight that natural gas prices could increase by more than 50 percent as a result of LNG exports. However, this ignored the assumptions behind this number: it was based on the price of natural gas in one year under the most extreme assumptions of exports and domestic resource base. A more comprehensive analysis should include an assessment of the average price impact from 2015 to 2035. When distinguishing between the various studies, policymakers should identify which assumptions most resemble the existing natural gas market and its likely direction, and which models are most reflective of the complex nature of domestic and global natural gas trade. Assuming realistic volumes of natural gas exports as well as a reasonable supply response by natural gas producers are important considerations. It is important to note that the supply curves in the various studies reflect different interpretations of the economics of marginal production. The Power sector and industrial sector Part I indicated that the power-generation and industrial sectors would account for most of the demand for newly available natural gas resources. As shown above, LNG exports are likely to increase domestic prices of natural gas, suggesting negative consequences for these two competing sectors. In their analyses, both Deloitte and EIA found that the majority—63 percent, according to both studies—of the exported natural gas will come from new production as opposed to displaced consumption from other sectors. By contrast, between 17 and 38 percent of supply of natural gas for export would be met by reduced demand, as higher prices pushes some domestic consumers to use less gas. In the power generation and industrial sectors, the price impacts of LNG exports are likely to have modest impacts. In the power sector, natural gas has historically been used as a back up to coal and nuclear base-load generation. For such gas used at the margin, the increase in electricity prices as a result of LNG exports would be limited by its competitiveness relative to other fuels: as soon as it becomes more expensive than the alternative for back up generation, power producers will substitute away from gas. 91 According to ICF International, a $0.64/MMBtu increase in the price of natural gas would result in an electricity price increase of between $1.66 and $4.97/megawatt-hour (MWh), depending on how often gas is used as the marginal fuel for electricity. Deloitte estimates that the price increase of electricity would not be more than $1.65/MWh. 92 EIA estimates that electricity price impacts will be marginal as well (between $1.40/MWh and $2.90/MWh) except in the “highrapid” export scenario. 93 The EIA Annual Energy Outlook 2011 estimates that, without exporting LNG, the average price of electricity (across all fuels) in 2035 will be $92/MWh. 94 In the longer term, natural gas is itself likely to be used for more base-load generation. The rapid increase in shale gas production, coupled with the retirements of as much as 50 gigawatts (GW) of coal-fired electricity due to plant age or inability to adhere to possibly forthcoming EPA regulations is likely to increase the demand for natural gas in the power sector. According to some analysts, the near-term demand caused by the retirements of the oldest and least efficient coal-fired power plants could result in an additional natural gas demand of 2 bcf/day. 95 Given the lack of environmentally and economically viable alternatives, a moderate increase in gas prices is unlikely to result in a large move away from natural gas, although increased costs will be transferred to customers. Natural gas consumption in the power sector has been considered economic at prices much higher than those resulting from LNG exports in even the highest price-impact projections. Even prior to the shale gas “revolution,” when natural gas prices were high, natural gas demand was increasing in the power sector. The EIA Annual Energy Outlook 2005— published in a year when average well head prices were over $7/MMBTU—projected that natural gas demand in the electricity sector would increase by 70 percent between 2003 and 2015. 96 Unlike the power sector, which continued to build natural-gas fired generation during a period of increasing gas prices, the industrial sector was negatively affected by growing natural gas import dependence, high gas prices, and gas price volatility. Between 2000 and 2005, the price of natural gas increased by 99 percent and LNG imports more than doubled. 97 By 2005, the ratio of the price of oil to the price of natural gas was approximately 6:1, just below the 7:1 oil-to-gas price ratio at which U.S. petrochemical and plastics producers are globally competitive. 98 That same year Alan Greenspan, then-Chairman of the Federal Reserve, noted that because of natural gas price increases “the North American gas-using industry [was] in a weakened competitive position.” 99 Since then the price of natural gas has collapsed. In 2011, the oil-to-natural gas price ratio was more than 24:1. In 2012 it has been even higher. The decline in natural gas prices has galvanized the industrial sector. A joint study by PwC and the National Association for Manufacturers, an industry trade group, found that the development of shale gas could save manufacturers as much as $11.6 billion per year in feedstock costs through 2025. 100 New investments in petrochemical and plastics producing facilities are occurring throughout the East and Southeast, largely predicated on the availability of inexpensive natural gas. Opponents of LNG exports contend that such investments would be deterred in the future as a result of increases in the price of natural gas. However, the evidence suggests that the competitive advantage of U.S. industrial producers relative to its competitors in Western Europe and Asia is not likely to be affected significantly by the projected increase in natural gas prices resulting from LNG exports. As European and many Asian petrochemical producers use oil-based products such as naphtha and fuel oil as feedstock, U.S. companies are more likely to enjoy a significant cost advantage over their overseas competitors. Even a one-third decline in the estimated price of crude oil in 2035 would result in an oil-to-gas ratio of 14:1. 101 There is also the potential for increased exports to help industrial consumers. Ethane, a liquid byproduct of natural gas production at several U.S. gas plays, is the primary feedstock of ethylene, a petrochemical product used to create a wide variety of products. According to a study by the American Chemistry Council, an industry trade body, a 25 percent increase in ethane production would yield a $32.8 billion increase in U.S. chemical production. By providing another market for cheap dry gas, LNG exports will encourage additional production of natural gas liquids (NGL) that are produced in association with dry gas. According to the EIA, ethane production increased by nearly 30 percent between 2009 and 2011 as natural gas production from shale started to grow substantially. Ethane production is now at an alltime high, with more than one million barrels per day of ethane being produced. 102 Increased gas production for exports results in increased production of such natural gas liquids, in which case exports can be seen as providing a benefit to the petrochemical industry. natural gas price volatility A major concern among domestic end users of natural gas is the possibility of an increase in natural gas price volatility resulting from an increase in U.S. LNG exports. As figure 8 demonstrates, the price volatility experienced during the 2000s was the highest the domestic gas market has experienced in the past three decades. The volatility of the natural gas market in the 2000s was largely caused by a tight supply-demand balance. Natural gas demand increased substantially as the U.S. economy grew and natural gas was viewed as environmentally preferable to coal for power generation. This increase in demand coincided with a reduction in domestic supply and an increased reliance on imports. The recent surge in U.S. natural gas production has resulted in less market volatility since 2010. According to EIA, the standard deviation of the price of natural gas (a general statistical indicator of volatility) between 2010 and 2011 was one-third what it was during the 2000s. 103 Potential exports of U.S. LNG concerns some domestic consumers for two principal reasons: greater volatility in domestic natural gas prices; and exposure of domestic natural gas prices to higher international prices resulting in a convergence between low U.S. prices and high international prices. There is an insufficient amount of data and quantitative research on the relationship between do mestic natural gas price volatility and LNG exports. However, certain characteristics of the LNG market are likely to limit volatility. LNG is bound by technical constraints: it must be liquefied and then transported on dedicated tankers before arriving at terminals where a regasification facility must be installed. Liquefaction facilities have capacity limits to how much gas they can turn into LNG. If they are operating at or close-to full capacity, such facilities will have a relatively constant demand for natural gas, therefore an international price or supply shock would have little impact on domestic gas prices. Moreover, unlike oil trading, in which an exporter—theoretically—sells each marginal barrel of production to the highest bidder in the global market, the capacity limit on LNG production and export means that LNG exporters have an infrastructure-limited demand for natural gas leaving the rest of the natural gas for domestic consumption. As most LNG infrastructure facilities are built on a project finance basis and underpinned by long-term contracts, this demand can be anticipated by the market years in advance, reducing the likelihood of volatility. The macroeconomy and jobs The macroeconomic and job implications of LNG exports depend on two principal factors: the gains from trade from exploiting pricing differentials and inefficiencies of the global market; and the employment implications of those gains, higher domestic natural gas prices, and greater domestic natural gas production. The Department of Energy has commissioned a study on both the macroeconomic and employment implications of U.S. LNG exports, which will be released later this year. This study will provide a qualitative assessment of the implications of LNG exports to the U.S. economy and employment. LNG exports are likely to be a net benefit to the U.S. economy, although probably not a significant contributor in terms of total U.S. GDP. Exports of U.S. natural gas will take advantage of the benefits of the existing producer’s surplus resulting from the pricing differentials between the natural gas markets in the United States, Europe, and Asia. Contractual terms will determine how this surplus is shared between U.S. sellers and foreign buyers. 104 The benefit of this trade will likely outweigh the cost to domestic consumers of the increase in the price of natural gas as most of the natural gas demanded by exports will come from new natural gas production as opposed to displacing existing production from domestic consumers. On the other hand, LNG exports from the United States are likely to put marginal upward pressure on the relative value of the U.S. dollar. In March 2012, Citigroup released a report on North American hydrocarbon production that included a model of the macroeconomic impact of U.S. oil and gas exports. The Citi analysis found that oil and gas exports would cause a nearly two percent decline in the current account deficit by 2020, but that the exchange rate implications would be modest. By 2020, the U.S. dollar would appreciate by between 1.6 and 5.4 percent. 105 The implications of LNG exports on job creation are similarly difficult to quantify. Other than temporary construction jobs created by the need to build liquefaction capacity, pipelines, and other ancillary infrastructure, the operation of the liquefaction facility will likely provide little permanent employment benefit. As outlined in the section on price impacts above, as much of the gas for export will come from new production, rather than the displacement of consumption in other sectors, the negative economic, and therefore jobrelated, effects on those sectors is likely to be limited. Beyond the labor required for additional gas production to satisfy LNG exports, the net impact of LNG exports is likely to be minimal. Further upstream, the job potential may be greater. By increasing domestic natural gas production, employment from additional oil and gas producers will increase, as will the demand for manufacturers of equipment for oil and gas production, gathering, and transportation. domestic energy security Aside from the price impact of potential U.S. LNG exports, a major concern among opponents is that such exports would diminish U.S. “energy security”; that exports would deny the United States of a strategically important resource. The extent to which such concerns are **valid** depends on several factors, including the size of the domestic resource base, and the liquidity and functionality of global trade. As Part I of this report notes, geological evidence suggests that the volumes of LNG export under consideration would not materially affect the availability of natural gas for the domestic market. Twenty years of LNG exports at the rate of 6 bcf/day, phased in over the course of 6 years, would increase demand by approximately 38 tcf. As presented in Part I, four existing estimates of total technically recoverable shale gas resources range from 687 tcf to 1,842 tcf; therefore, exporting 6 bcf/day of LNG over the course of twenty years would consume between 2 and 5.5 percent of total shale gas resources. While the estimates for **shale gas reserves are uncertain**, in a scenario where reserves are perceived to be lower than expected, domestic natural gas prices would increase and exports would almost immediately become uneconomic. In the long-term, it is possible that U.S. prices and international prices will converge to the point at which they settle at similar levels. In that case, the United States would have more than adequate import capacity (through bi-directional import/export facilities) to import gas when economic. A further gas-related consideration with regard to energy security is the effects of increased production of associated natural gas with the increasing volumes of U.S. unconventional oil. As the primary energy-security concern for the United States related to oil, the application of fracking and horizontal drilling in oil production is reducing U.S. oil import dependence, while simultaneously producing substantial volumes of natural gas, which, given the relative economics of oil and gas, is effectively delivered at zero (or, in the case of producers who have to invest in equipment to manage flaring and venting, negative) cost. To the extent that associated gas from unconventional oil production is used for LNG export, it can be seen as a consequence of—rather than a threat to—increased U.S. energy security. international implications The international implications of LNG exports from the United States can be divided into pricing, geopolitics, and environment. international Pricing As discussed in Part I, the global LNG market is informally separated into three markets: North America, the Atlantic Basin (mostly Europe), and the Pacific Basin (including Japan, South Korea, Taiwan, China, and India). These markets are separated because of important technical differences that impact the pricing structure for LNG in each market. The North American natural gas market is competitive and prices are traded in a transparent and open market. The Atlantic Basin is dominated by European LNG consumers such as the United Kingdom, Spain, France, and Italy, and is a hybrid of a competitive U.K. market that was liberalized in the mid-1990s and a Continental European market that is dominated by oil-linked, take-or-pay contracts. In recent years, the U.K. hub, the National Balancing Point (NBP), has traded at a premium to the U.S. hub, the Henry Hub. The Pacific Basin is a more rigid market that depends heavily on oilindexed contracts that are more expensive than those used in the Atlantic Basin. While they have no central trading hub, the Pacific Basin consumers such as Japan and South Korea (which is implementing its recently-signed free-trade agreement with the United States) currently import LNG based on a pricing formula known informally as the Japan Crude Cocktail, the average price of custom-cleared oil imports into Tokyo. Many Pacific Basin contracts have a built-in price floor and price ceiling depending on the price of oil. 106 Without exporting any natural gas, the U.S. shale gas “revolution” has already had a positive impact on the liquidity of global LNG markets. Many LNG cargoes that were previously destined for gas-thirsty U.S. markets were diverted and served spot demand in both the Atlantic and Pacific Basins. The increased availability of LNG cargoes has helped create a looser LNG market for other consumers (see figure 9). This in turn has helped apply downward pressure to the terms of oillinked contracts resulting in the renegotiation of some contracts, particularly in Europe. Increased availability of LNG cargoes also accelerated a recent trend of increasing reliance of consumers on spot LNG markets. In 2010 short-term and spot contracts represented 19 percent of the total LNG market, up from only a fraction one decade earlier. 107 In this case, increasing demand for spot cargoes indicates that consumers are taking advantage of spot prices that are lower than oilindexed rates. LNG exports will help to sustain market liquidity in what looks to be an increasingly tight LNG market beyond 2015 (see figure 10). Should LNG exports from the United States continue to be permitted, they will add to roughly 10 bcf/day of LNG that is expected to emerge from Australia between 2015 and 2020. Nevertheless, given the projected growth in demand for natural gas in China and India and assuming that some of Japan’s nuclear capacity remains offline, demand for natural gas will outpace the incremental supply. This makes U.S. LNG even more valuable on the international market. Although it will be important to global LNG markets, it is unlikely that the emergence of the United States as an exporter of LNG will change the existing pricing structure overnight. Not only is the market still largely dependent on long-term contracts, the overwhelming majority of new liquefaction capacity emerging in the next decade (largely from Australia) has already been contracted for at oil-indexed rates. 108 The incremental LNG volumes supplied by the United States at floating Henry Hub rates will be small in comparison. But while U.S. LNG will not have a transformational impact, by establishing an alternate lower price for LNG derived through a different market mechanism, U.S. exports may be central in catalyzing future changes in LNG contract structure. As previously mentioned, this impact is already be ing felt in Europe. A number of German utilities have either renegotiated contracts or are seeking arbitration with natural gas suppliers in Norway and Russia. The Atlantic Basin will be a more immediate beneficiary of U.S. LNG exports than the Pacific Basin as many European contracts allow for periodic revisions to the oil-price linkage. 109 In the Pacific Basin this contractual arrangement is not as common and most consumers are tied to their respective oil-linkage formulae for the duration of the contract. 110 Despite the increasing demand following the Fukushima nuclear accident, however, Japanese LNG consumers are actively pursuing new arrangements for LNG contracts. 111 There are other limits to the extent of the impact that U.S. LNG will have on global markets. It is unlikely that many of the LNG export facilities under consideration will reach final investment decision. Instead, it is more probable that U.S. natural gas prices will have rebounded sufficiently to the point that exports are not commercially viable beyond a certain threshold. (figure 11 illustrates the estimated costs of delivering LNG to Japan in 2020.) This threshold, expected by many experts to be roughly 6 bcf/day by 2025, is modest in comparison to the roughly 11 bcf/day of Australian LNG export projects that have reached final investment decision and are expected to be online by 2020. Also, the impact of U.S. LNG exports could be limited by a number of external factors that will have a larger bearing on the future of global LNG prices. For instance, a decision by the Japanese government to phase-out nuclear power would significantly tighten global LNG markets and probably displace any benefit provided by U.S. LNG exports. Conversely, successful and rapid development of China’s shale gas reserves would limit the demand of one of the world’s fastest-growing natural gas consumers. However, to the extent that U.S. LNG exports can help bring about a more globalized pricing structure, they will have economic and geopolitical consequences. Geopolitics A large increase in U.S. LNG exports would have the potential to increase U.S. foreign policy interests in both the Atlantic and Pacific basins. Unlike oil, natural gas has traditionally been an infrastructure-constrained business, giving geographical proximity and political relations between producers and consumers a high level of importance. Issues of “pipeline politics” have been most directly visible in Europe, which relies on Russia for around a third of its gas. Previous disputes between Moscow and Ukraine over pricing have led to major gas shortages in several E.U. countries in the winters (when demand is highest) of both 2006 and 2009. Further disagreements between Moscow and Kiev over the terms of the existing bilateral gas deal have the potential to escalate again, with negative consequences for E.U. consumers. The risk of high reliance on Russian gas has been a principal driver of European energy policy in recent decades. Among central and eastern European states, particularly those formerly aligned with the Soviet Union such as Poland, Hungary, and the Czech Republic, the issue of reliance on imports of Russian gas is a primary energy security concern and has inspired energy policies aimed at diversification of fuel sources for power generation. From the U.S. perspective such Russian influence in the affairs of these democratic nations is an impediment to efforts at political and economic reform. The market power of Gazprom, Russia’s state-owned gas monopoly, is evident in these countries. Although they are closer to Russia than other consumers of Russian gas in Western Europe, many countries in Eastern and Central Europe pay higher contract prices for their imports, as they are more reliant on Russian gas as a proportion of their energy mixes. In the larger economies of Western Europe, which consume most of Russia’s exports, there are efforts to diversify their supply of natural gas. The E.U. has formally acknowledged the need to put in place mechanisms to increase supply diversity. These include market liberalization approaches such as rules mandating third-party access to pipeline infrastructure (from which Gazprom is demanding exemption), and commitments to complete a single market for electricity and gas by 2014, and to ensure that no member country is isolated from electricity and gas grids by 2015. 112 Despite these formal efforts, there are several factors retarding the E.U.’s push for a unified effort to reduce dependence on Russian gas. National interest has been given a higher priority than collective, coordinated E.U. energy policy: the gas cutoffs in 2006 and 2009 probably contributed to the acceptance of the Nord Stream project, which carries gas from Russia into Germany. Germany’s decision to phase out its fleet of nuclear reactors by 2022 will result in far higher reliance on natural gas for the E.U.’s biggest economy. The environmental imperative to reduce carbon emissions—codified in the E.U.’s goal of essentially decarbonizing its power sector by the middle of century—mean that natural gas is being viewed by many as the short-to medium fuel of choice in power generation. Finally, the prospects for European countries to replicate the unconventional gas “revolution” that has resulted in a glut of natural gas in the United States look uncertain. Several countries, including France and the U.K., have encountered stiff public opposition to the techniques used in unconventional gas production, while those countries, such as Poland and Hungary, that have moved ahead with unconventional-gas exploration have generally seen disappointing early results. Collectively, these factors suggest that the prospects for reduced European reliance on Russian gas appear dim. The one factor that has been working to the advantage of advocates of greater European gas diversity has been the increased liquidity of the global LNG market, discussed above. Russia’s dominant position in the European gas market is being eroded by the increased availability of LNG. Qatar’s massive expansion in LNG production in 2008, coupled with the rise in unconventional gas production in the United States as well as a drop in global energy demand due to the global recession, produced a global LNG glut that saw many cargoes intended for the U.S. market diverted into Europe. As mentioned previously, with an abundant source of alternative supply, some European consumers, mainly Gazprom’s closest partners, were able to renegotiate their oil-linked, takeor-pay contracts with Gazprom. As figure 10 illustrates, however, in the wake of the Fukushima natural disaster and nuclear accident in Japan and a return to growth in most industrialized economies, the LNG market is projected to tighten considerably in the short-term, potentially returning market power to Russia. However, there is a second, structural change to the global gas market that may have more lasting effects to Russia’s market power in the European gas market. LNG is one of the fastest growing segments of the energy sector. The growth of the LNG market, both through long-term contract and spot-market sales, is likely to put increasing pressure on incumbent pipeline gas suppliers. A significant addition of U.S. LNG exports will accelerate this trend. In addition to adding to the size of the market, U.S. LNG contracts are likely to be determined on a “floating” basis, with sales terms tied to the price of a U.S. benchmark such as Henry Hub, eroding the power of providers of long-term oil linked contract suppliers such as Russia. While U.S. LNG will not be a direct tool of U.S. foreign policy—the destination of U.S. LNG will be determined according to the terms of individual contracts, the spot-price-determined demand, and the LNG traders that purchase such contracts—the addition of a large, market-based producer will indirectly serve to increase gas supply diversity in Europe, thereby providing European consumers with increased flexibility and market power. Increased LNG exports will provide similar assistance to strategic U.S. allies in the Pacific Basin. By adding supply volumes to the global LNG market, the U.S. will help Japan, Korea, India, and other import-dependent countries in South and East Asia to meet their energy needs. The desire on the part of Pacific Basin countries for the U.S. to become a gas supplier to the region has been underlined by the efforts of the Japanese government, which has attempted to secure a free-trade agreement waiver from the United States to allow exports. As with oil price-linked Russian gas contracts in Eu- rope, U.S. LNG exports linked to a floating Henry Hub benchmark, have the potential to weaken the market power of incumbent LNG providers to Asia, increasing the negotiating power of consumers and decreasing the price. As U.S. foreign policy undergoes a “pivot to Asia,” the ability of the U.S. to provide a degree of increased energy security and pricing relief to LNG importers in the region will be an important economic and strategic asset. Beyond the basin-specific considerations of U.S. LNG exports, they would provide a source of predictable natural gas supply that is relatively free from unexpected production or shipping disruption. With Qatar representing roughly one-third of the global LNG market, a blockade or military intervention in the Strait of Hormuz or a direct attack on Qatar’s liquefaction facilities by Iran would inflict chaos on world energy markets. While the United States government will be unable to physically divert LNG cargoes to specific markets or strategic allies that are most affected (gas allocation will be made by the market players), additional volumes of LNG on the world market will benefit all consumers. international Environmental implications Proposed LNG exports from the United States have encountered domestic opposition on environmental grounds. As outlined in Part I, natural gas production causes greenhouse gas emissions in the upstream production process through leakages, venting, and flaring. The greenhouse gas footprint of shale gas production has been the subject of vigorous debate, with some studies suggesting that methane from the production process leads to shale gas having a higher global warming impact than that of other hydrocarbons including coal. While the methodology underlying such studies has been widely criticized, there is no doubt that leakage and venting of natural gas is a serious negative environmental consequence of natural gas production and transportation: EPA has estimated that worldwide leakages and venting volumes were 3,353.5 bcf in 2010. 113 By contrast, some advocates of U.S. exports of LNG maintain that they have the potential to bring global environmental benefits if they are used to displace more carbon-intensive fuels. According to the IEA, natural gas in general has the potential to reduce carbon dioxide emissions by 740 million tonnes in 2035, nearly half of which could be achieved by the displacement of coal in China’s power-generation portfolio. Natural gas—in the form of LNG—also has the potential to displace more carbon-intensive fuels in other major energy users, including across the EU and in Japan, which is being forced to burn more coal and oil-based fuels to make up for the nuclear generation capacity lost in the wake of the Fukushima disaster. In addition to its relatively lower carbon-dioxide footprint, natural gas produces lower emissions of pollutants such as sulfur dioxide nitrogen oxide and other particulates than coal and oil. Natural gas—both in the form of LNG and compressed natural gas—is also being viewed as a potential replacement for oil in the vehicle transportation fleet, with large carbon dioxide abatement potential. 114 However, as discussed in Part I, even the United States with its low gas prices is unlikely to see any significant move toward natural gas vehicles in the absence of government policies; the prospects for such vehicles entering the European or Asian markets, where gas is several times as expensive, are remote. On the other hand, additional volumes of natural gas in the global power generation fleet may also have longer-term detrimental consequences for carbon emissions. According to the IEA, by backing out nuclear and renewable energy generation, natural gas could add 320Mt of carbon dioxide by 2035. 115 Whether U.S. LNG exports contribute to reduced carbon dioxide emissions through the displacement of coal fired power generation or to the crowding out of renewable and nuclear energy in the global energy mix is something of a moot point. According to the IEA, global power generation is projected to exceed 27,000 terawatt hours per year by 2020. 116 Even assuming U.S. exports of 6 bcf/day (on the upper end of the range of expectations), zero losses due to transportation, regasification, and transmission, and a high natural gas power plant efficiency level of 60 percent, such volumes would account for just over one percent of total global power generation. 117 Therefore, although the domestic environmental impacts associated with shale gas extraction may, pending the outcome of further study, prove to be a cause for concern with respect to greenhouse gas emissions, the potential for U.S. LNG exports to make a meaningful impact on global emissions through changes to the global power generation mix is negligible. T his paper has attempted to answer two questions: Are U.S. LNG exports feasible? If so, what are the implications of U.S. LNG exports? **For exports to be feasible, several demand and supply-related conditions need to be met**. On the supply side, adequate resources must be available and their production must be sustainable over the long-term. The regulatory and policy environment will need to accommodate natural gas production to ensure that the resources are developed. The capacity and infrastructure required to enable exports must also be in place. This includes the adequacy of the pipeline and storage network, the availability of shipping capacity, and the availability of equipment for production and qualified engineers. On the demand side, LNG exports will compete with two main other domestic end uses for natural gas: the power-generation sector, and the industrial and petrochemical sector. According to most projections, the U.S. electricity sector will see an increased demand for natural gas as it seeks to comply with policies and regulations aimed at reducing carbon-dioxide emissions and pollutants from the power-generation fleet. Cheaper natural gas in the industrial sector has the potential to lower the cost of petrochemical production and to improve the competitiveness of a range of refining and manufacturing operations. Advocates of natural gas usage in the transportation fleet – particularly in heavy-duty vehicles (HDVs) – see it as a way to decrease the country’s dependence on oil, although absent major policy support, this sector is unlikely to represent a significant source of gas demand. For increased U.S. LNG exports to be feasible, they will also need to be competitive with supplies from other sources. The major demand centers that would import U.S. LNG would be Pacific Basin consumers (Japan, South Korea, and Taiwan, and increasingly China and India), and Atlantic Basin consumers, mostly in Europe. The supply and demand balance in the Atlantic and Pacific Basins and, therefore the feasibility for natural gas exports from the United States, depend heavily on the uncertain outlook for international unconventional natural gas production. Recent assessments in countries such as China, India, Ukraine, and Poland indicate that each country has significant domestic shale gas reserves. If these reserves are developed effectively—which is likely to be difficult in the short-term due to a lack of infrastructure, physical capacity, and human capacity—many of these countries would dramatically decrease their import dependence, with negative implications for existing and newcomer LNG exporters. Detailed analysis of the foregoing factors suggests that the exportation of liquefied natural gas from the United States is logistically feasible. Based on current knowledge, the domestic U.S. natural gas resource base is large enough to accommodate the potential increased demand for natural gas from the electricity sector, the industrial sector, the residential and commercial sectors, the transportation sector, and exporters of LNG. Other obstacles to production, including infrastructure, investment, environmental concerns, and human capacity, are likely to be surmountable. Moreover, the current and projected supply and demand fundamentals of the international LNG market are conducive to competitive U.S.-sourced LNG. While LNG exports may be practically feasible, they will be subject to approval by policy makers if they are to happen. In making a determination on the advisability of exports, the federal government will focus on the likely implications of LNG exports: i.e. whether LNG exports are in the “public interest.” The extent of the domestic implications is largely dependent upon the price impact of exports on domestic natural gas prices. While it is clear that domestic natural gas prices will increase if natural gas is exported, most existing analyses indicate that the implications of this price increase are likely to be modest.

#### Nuclear power puts downward pressure on natural gas prices – that makes exports politically viable

Perry 12 (Mark J., Scholar – AEI, Professor of Economics and Finance – University of Michigan, “Natural gas and nuclear power need to share the lead in power generation for the future,” American Enterprise Institute, 9-26, http://www.aei.org/article/natural-gas-and-nuclear-power-need-to-share-the-lead-in-power-generation-for-the-future/)

Recent advances in drilling technologies have unleashed a boom in domestic natural gas production. The United States may have more than 100 years' worth of gas reserves, and perhaps much more, including large untapped resources in Michigan. Policy makers are increasingly looking to natural gas as the locomotive of economic growth. A striking example is the increasing use of gas in electricity production. For the last several years, natural gas has accounted for more than 80% of new electric generating capacity in the United States. It now provides 32% of total electricity generation, up from 25% just two years ago, and its share could reach 50% by 2030. Natural gas, of course, has many virtues as a fuel. Its carbon content is less than half that of coal and it emits no mercury or other toxic particulates. But natural gas is needed for **much more than electricity generation**. In addition to residential and commercial heating, gas accounts for the bulk of the fuel used by the petrochemical industry. Manufacturing relies on the availability of cheap gas, and its use in transportation is increasing. Additionally, gas producers are **gearing up to export some of the gas to markets in Europe and Asia**, where gas costs up to five times more than it does in the United States. A dozen or more U.S. companies have applied for licenses to export liquefied natural gas from terminals, mainly on the Gulf of Mexico. Because of its multiple uses and rising popularity, the demand for natural gas is starting to increase, and its price could rise significantly. That is a real possibility, and would be consistent with its long history of price volatility. If we hope to maintain the security of our energy supply, we will need to expand the use of other energy sources, including nuclear power, which is also environmentally attractive and affordable. Although the capital cost of building a nuclear plant is high, the average price of nuclear-generated electricity is **lower than** power produced from **natural gas**. In 2011, the production cost of nuclear power was 2.19 cents per kilowatt-hour, compared to 4.51 cents for natural gas and 3.23 cents for coal. Today about 20% of America’s electricity comes from nuclear power. But demand for electricity is growing steadily and that trend will continue in the future. Without building new nuclear plants, pressure will build to use even more natural gas for electricity generation, making less available for manufacturing and transportation.

#### Natural gas demand is closely monitored – perception of the plan triggers the link

Burnes et al 12-7 (John, Lisa Epifani, Curt Moffatt, Janna Chesno, Partner – VanNess Feldman, “DOE Releases LNG Export Study and Requests Public Comment,” VanNess Feldman, 2012, http://www.vnf.com/news-alerts-778.html)

Exports of natural gas, including LNG, must be authorized by DOE’s Office of Fossil Energy. By statute, exports of LNG to FTA nations must be approved “without modification or delay”. By contrast, before approving an application to export LNG to non-FTA nations, DOE must determine that the export is and will remain in the “public interest”. DOE’s primary focus is upon the domestic need for the gas to be exported. In May 2011, DOE conditionally authorized Sabine Pass Liquefaction, LLC (Sabine Pass) to export LNG to non-FTA nations. The authorization was finalized in August 2012. This remains the only long-term DOE authorization to export LNG from the lower 48 states to non-FTA nations. In the Sabine Pass order, DOE determined that it had a continuing duty to protect the public interest, and announced that it would monitor gas supply/demand conditions in the United States and the world to ensure that the cumulative impacts of the exports authorized in the order and in future orders would not lead to a reduction in the supply of natural gas needed to meet essential domestic needs. DOE also provided notice that it would take any action in the future, including amending or even revoking export authorizations, as appropriate or necessary to protect the public interest.

#### That kills Russia’s economy

Mead 12

Walter Russell Mead, April 25, 2012 (Professor of Foreign Affairs and Humanities at Bard College, Henry A. Kissinger senior fellow for U.S. foreign policy at the Council on Foreign Relations (CFR), and Editor-at-Large of The American Interest magazine), , The American Interest, North American Shale Gas Gives Russia Serious Headache, <http://blogs.the-american-interest.com/wrm/2012/04/25/north-american-shale-gas-gives-russia-serious-headache/>

North America’s shale gas boom is chipping away at the market for gas producers like Russia. What’s more, if the United States becomes a gas exporter, Russia’s customers (especially in Europe) could decide to cancel expensive contracts with Gazprom in favor of cheaper American natural gas. “If the US starts exporting LNG to Europe and Asia, it gives [customers there] an argument to renegotiate their prices with Gazprom and Qatar, and they will do it,” says Jean Abiteboul, head of Cheniere supply & marketing. Gazprom supplied 27 percent of Europe’s natural gas in 2011. While American gas is trading below $2 per MMBTU (million British thermal units), Gazprom’s prices are tied to crude oil markets, and its long-term contracts charge customers roughly $13 per MMBTU, says the *FT*. European customers would love to reduce their dependence on Gazprom and start to import American gas. Already Gazprom has had to make concessions to its three biggest customers, and others are increasingly dissatisfied with their contracts. Worse, from Russia’s point of view: evidence that western and central Europe contain substantial shale gas reserves of their own. Fracking is unpopular in thickly populated, eco-friendly Europe, but so are high gas prices. All this ought to give Russia serious heartburn. Eroding Gazprom’s dominance of the European energy market would be a major check on Russian economic growth and political influence.

**Goes nuclear**

**Filger 9** (Sheldon, Columnist and Founder – Global EconomicCrisis.com, “Russian Economy Faces Disasterous Free Fall Contraction”, <http://www.huffingtonpost.com/sheldon-filger/russian-economy-faces-dis_b_201147.html>)

In Russia, historically, economic health and political stability are intertwined to a degree that is rarely encountered in other major industrialized economies. It was the economic stagnation of the former Soviet Union that led to its political downfall. Similarly, Medvedev and Putin, both intimately acquainted with their nation's history, are unquestionably alarmed at the prospect that Russia's economic crisis will endanger the nation's political stability, achieved at great cost after years of chaos following the demise of the Soviet Union. Already, strikes and protests are occurring among rank and file workers facing unemployment or non-payment of their salaries. Recent polling demonstrates that the once supreme popularity ratings of Putin and Medvedev are eroding rapidly. Beyond the political elites are the financial oligarchs, who have been forced to deleverage, even unloading their yachts and executive jets in a desperate attempt to raise cash. Should the Russian economy deteriorate to the point where economic collapse is not out of the question, the impact will go far beyond the obvious accelerant such an outcome would be for the Global Economic Crisis. There is a geopolitical dimension that is even more relevant then the economic context. Despite its economic vulnerabilities and perceived decline from superpower status, Russia remains one of only two nations on earth with a nuclear arsenal of sufficient scope and capability to destroy the world as we know it. For that reason, it is not only President Medvedev and Prime Minister Putin who will be lying awake at nights over the prospect that a national economic crisis can transform itself into a virulent and destabilizing social and political upheaval. It just may be possible that U.S. President Barack Obama's national security team has already briefed him about the consequences of a major economic meltdown in Russia for the peace of the world. After all, the most recent national intelligence estimates put out by the U.S. intelligence community have already concluded that the Global Economic Crisis represents the greatest national security threat to the United States, due to its facilitating political instability in the world. During the years Boris Yeltsin ruled Russia, security forces responsible for guarding the nation's nuclear arsenal went without pay for months at a time, leading to fears that desperate personnel would illicitly sell nuclear weapons to terrorist organizations. If the current economic crisis in Russia were to deteriorate much further, how secure would the Russian nuclear arsenal remain? It may be that the financial impact of the Global Economic Crisis is its least dangerous consequence.

### Solvency

#### No spillover -- IFRs too costly and take too long

Makhijani 1 (Arjun, PhD in Engineering, President –Institute for Energy and Environmental Research, “Letters to the Editor” Bulletin of Atomic Scientists, May, 57(3), p. 4-5)

As for IFRs, the 1996 National Academy of Sciences (NAS) study cited by Stanford concluded that there were several safety issues that remain to be resolved and that using advanced sodium-cooled reactors for transmutation “would require substantial development, testing, and large-scale demonstration under Nuclear Regulatory Commission safety review and licensing before one could proceed with confidence.” Even if all the technical problems posed by IFRs were to be solved, the **costs of using this technology would be prohibitive**. In the United States alone, IFRs would have to fission roughly 80,000 metric tons of heavy metal (about 99 percent of which is uranium). To transmute this amount of heavy metal over 40 years would require the building of about 2,000 IFRs of 1,000-megawatts capacity each. To manage the worldwide stock of spent fuel (both current and projected) in this way would require roughly four times as many reactors. Even assuming that one IFR reactor was brought on line a week, it would take 150 years to build them. The NAS study also expressed skepticism that the reprocessing technology associated with the IFR could be made as economical as its proponents claim. The IFR requirement of collocating the reprocessing element with the reactor would result in even **higher costs** because of the small scale of collocated plants. NAS's conclusion that there would be a 2 to 7 percent increase in electricity costs was based on low reactor costs and transmutation costs that were “likely to be no less than $50 billion and easily could be over $100 billion” for 600 metric tons of tran-suranics only. If the cost of reprocessing uranium is added, the total cost would increase to $300 billion—$900 billion for the United States alone. It is easy to see why no current transmutation scheme seriously proposes to transmute all the uranium in spent fuel.

#### IFR’s take too long to build

Green, 10 – national nuclear campaigner for Friends of the Earth and a member of the EnergyScience Coalition, PhD in nuclear engineering (Justin, February. , “NUCLEAR WEAPONS, NUCLEAR POWER & INTEGRAL FAST REACTORS,” <http://foe.org.au/sites/default/files/IFR-FoEA-web-Feb2010.pdf>)

Integral fast reactors (IFRs) are reactors proposed to be fuelled with a metallic alloy of uranium and plutonium, with liquid sodium as the coolant. 'Fast' because they would use unmoderated neutrons (as with¶ the better-known fast breeder reactors). 'Integral because they would operate in conjunction with on-site¶ electrolytic 'pyroprocessing' to separate plutonium and¶ other long-lived radioisotopes and to re-irradiate (both¶ as an additional energy source and to convert longlived waste products into shorter-lived, less problematic wastes). **IFRs don't exist and it is unlikely that they will exist any time soon**. For example, South Korea recently announced its intention to embark on a program to assess the economic and technical viability of IFRs by the year 2028. That's the best part of **two decades** –just to assess the concept. In theory, there's lots to like about the IFR concept – e.g. destroying nuclear waste and fissile (weapons) material and producing electricity in the process. In practice, there's every likelihood they would be problematic. Nuclear engineer Dave Lochbaum from the Union of Concerned Scientists has summed up the dilemma: "The IFR looks good on paper. So good, in fact, that we should leave it on paper. For it only gets ugly in moving from blueprint to backyard."

#### Nuclear’s too expensive

Folbre 12 (Nancy, Professor of Economics – University of Massachusetts, Amherst, “The Nurture of Nuclear Power,” New York Times, 3-26, <http://economix.blogs.nytimes.com/2012/03/26/the-nurture-of-nuclear-power/>)

Remember the brouhaha about $563 million in Obama administration loan guarantees to Solyndra, the solar panel manufacturer that went belly up last fall? Neither President Obama nor Republicans in Congress have voiced opposition to an expected $8.3 billion Energy Department guarantee to help the Southern Company, a utility giant, build nuclear reactors in Georgia. Pressed to respond to the comparison, Representative Cliff Stearns, Republican of Florida and chairman of the Energy and Commerce subcommittee on oversight and investigations, explained that the loan guarantee for nuclear power plant construction was for a “proven industry that has been successful and has established a record.” The nuclear power industry has certainly established a record – for terrifying accidents. Most recently, the Fukushima Daiichi disaster in Japan led to the evacuation of 90,000 residents who have yet to return home and to the resignation of the prime minister. It prompted the German government to begin phasing out all nuclear generation of electricity by 2022. Yet the industry has proved remarkably successful at garnering public support in the United States, ranging from public insurance against accident liability to loan guarantees. An article last year in The Wall Street Journal observed that subsidies per kilowatt hour during its initial stages of development far exceeded those provided to solar and wind energy technologies. According to a detailed report published by the Union of Concerned Scientists, subsidies to the nuclear fuel cycle have often exceeded the value of the power produced. Buying power on the open market and giving it away for free would have been less costly. Heightened concerns about safety have driven recent cost estimates even higher, scaring off most private investors. Travis Hoium, an analyst who has written extensively about the industry on the investment Web site The Motley Fool, calls nuclear power a dying business. In an article, “Warren Buffett Wants a Subsidy From You,” he clearly explains recent efforts to shift risk from investors to ratepayers by allowing utilities to charge for construction in advance. Investor interest in nuclear-generated electricity has declined partly as a result of the boom in shale gas extraction. But energy sources that don’t increase carbon emissions are also playing a major role, with wind, hydropower and other renewables projected to provide about 30 percent of expected additions to power generation capacity in the United States between 2010 and 2035.

#### **Natural gas blocks investment**

Domenici and Miller 12 (Pete, Senator – New Mexico, and Dr. Warren F., Co-Chair – Nuclear Initiative; Former Assistant Secretary for Nuclear Energy – Department of Energy, “Maintaining U.S. Leadership in Global Nuclear Energy Markets,” Bipartisan Policy Center, July, http://bipartisanpolicy.org/sites/default/files/Leadership%20in%20Nuclear%20Energy%20Markets.pdf)

Prospects for new reactor construction in the United States have constricted significantly in recent years. In the years following passage of EPACT05, 18 utilities applied for combined construction and operating licenses (COLs) to build a total of 28 reactors. 2 In addition, DOE received 19 applications for loan guarantees to support financing for 21 proposed reactors. A combination of factors—including downward revisions to electricity demand projections, difficulty executing the EPACT05 loan guarantee program as intended, and drastically reduced natural gas prices—has put all but two projects on hold. While these projects, comprising four reactors, have received NRC licenses and are currently under construction in Georgia and South Carolina, these plants still face financial, regulatory, and construction challenges. 3 And, though natural gas prices have historically been quite volatile, the ability to tap large shale gas reserves will likely keep natural gas prices sufficiently low to make financing additional new reactor construction very difficult for at least the next decade, if not longer.

#### Lack of nuclear workforce kills solvency

**Retief, 10** – Product Manager, Bentley Systems, Incorporated (Hilmar, December. “Knowledge Management: Solving the Nuclear Industry’s Brain Drain: How to Capture and Manage Your Company’s Institutional Knowledge for Immediate Action.” A Bentley White Paper. http://ftp2.bentley.com/dist/collateral/docs/assetwise/wp\_knowledge-management\_hilmar-retief.pdf)

As the nuclear renaissance takes shape, many organizations in this industry face a shortage of skills and knowledge due to retiring baby boomers. These retirements threaten nuclear facility bottom lines and compromise the safety and reliability of plant operations. The heyday of global nuclear development drew top talent from the best universities and an abundant pool of engineering and nuclear knowledge workers. However, in the United States, there hasn’t been a new nuclear power plant come online since the mid-1980s. This latency in the evolution of nuclear power not only reduced the number of university programs dedicated to nuclear, but also discouraged new engineers from pursuing disciplines in the nuclear field. The global freeze on new nuclear plant development during this same period further limited the amount of new talent entering the industry. Today, the new emphasis on green energy, smaller carbon footprints, and reducing the ecological impact and cost of fossil fuels is reviving the nuclear industry, resulting in more demand for nuclear professionals and an increased awareness of the need to maintain, sustain, and increase the nuclear knowledge base. But the growth of the industry will be impeded unless viable solutions are implemented to capture and apply the knowledge of the existing nuclear workforce. In 2006, the International Atomic Energy Agency (IAEA) published a report titled Risk Management of Knowledge Loss in Nuclear Industry Organizations. The report states that the U.S. is facing a ‘graying’ workforce in which literally half the current workers will reach retirement age within the next five years. And the bad news doesn’t stop there. It goes on to say that, “The lead time required to produce an individual capable of safely operating the complex nuclear systems and technologies may exceed the time frame available until substantial retirement of the existing workforce begins.”

#### Plan’s initial commercialization wont spillover – too many uncertainties

**Fahring, 11** – J.D. from the University of Texas School of Law, law clerk at the Texas Eleventh Court of Appeals interested in energy law, environmental law, and tax law (T.L., “NOTE: Nuclear Uncertainty: A Look at the Uncertainties of a U.S. Nuclear Renaissance.” Texas Environmental Law Journal, 41 Tex. Envtl. L.J. 279, Lexis.)

But this **initial success does not** necessarily **ensure that new nuclear construction will take place:** In announcing the new reactor license applications ... **utilities have** made clear **that they are not committed to actually building the reactors, even if the licenses are approved**. Large uncertainties about nuclear plant construction costs still remain ... All those problems helped cause the long cessation of U.S. reactor orders and will need to be addressed before financing for new multibillion-dollar nuclear power plants is likely to be obtained. n268

#### Financial incentives lock in inefficiency – kills competition

Loris, 11 – analyst at The Heritage Foundation (Nick, May. “Stop Picking Energy Winners and Losers with the Tax Code.” http://[www.heritage.org/research/commentary/2011/05/stop-picking-energy-winners-and-losers-with-the-tax-code](http://www.heritage.org/research/commentary/2011/05/stop-picking-energy-winners-and-losers-with-the-tax-code))

First, special tax credits for cherry-picked technologies artificially reduce the price for consumers. This makes them seem far more competitive than they actually are. Rather than increase competition, the artificial market distortion gives these technologies an unfair price advantage over other technologies. The more concentrated the subsidy or preferential treatment, the worse the policy is because the crowding-out effect for other technologies is larger. If subsidized technologies are market viable, then the tax break merely offsets private-sector costs for investments that would have been made either way. This creates industry complacency and perpetuates economic inefficiency by disconnecting market success from production costs. Furthermore, when the government becomes involved in the decision-making process, it increases the business incentive to send lobbyists to Capitol Hill to make their pitch why their industry needs those tax credits. Industries will plead that they need five years of tax credits then they’ll be good to go on their own. Five years later, they’re asking for five more years. These specific carve outs reduce the incentive for producers to be cost competitive with technologies that do not rely on help from the government.

### Warming

#### Plan Doesn’t solve warming

Green 9 (Dr. Jim, Senior Vice President for Resource Development – United Way of the Greater Triangle, “Nuclear Weapons and 'Fourth Generation' Reactors,” Friends of the Earth Australia, July, http://www.foe.org.au/anti-nuclear/issues/nfc/power-weapons/g4nw)

'Integral fast reactors' and other 'fourth generation' nuclear power concepts have been gaining attention, in part because of comments by US climate scientist James Hansen. While not a card-carrying convert, Hansen argues for more research: "We need hard-headed evaluation of how to get rid of long-lived nuclear waste and minimize dangers of proliferation and nuclear accidents. Fourth generation nuclear power seems to have the potential to solve the waste problem and minimize the others." Others are less circumspect, with one advocate of integral fast reactors promoting them as the "holy grail" in the fight against global warming. There are two main problems with these arguments. Firstly, nuclear power could at most make a modest contribution to climate change abatement, mainly because it is used almost exclusively for electricity generation which accounts for about one-quarter of global greenhouse emissions. Doubling global nuclear power output (at the expense of coal) would reduce greenhouse emissions by about 5%. Building six nuclear power reactors in Australia (at the expense of coal) would reduce Australia's emissions by just 4%.

#### Transportation outweighs

**Gordon, 10** – nonresident senior associate in Carnegie’s Energy and Climate Program, where her research focuses on climate, energy, and transportation issues in the United States and China (Deborah, December. “The Role of Transportation in Driving Climate Disruption.” http://carnegieendowment.org/files/transport\_climate\_disruption.pdf)

Climate impacts differ by sector. On-road transportation has the greatest negative effect on climate, especially in the short term. This is primarily because of two factors unique to on-road transportation: (1) nearly exclusive use of petroleum fuels, the combustion of which results in high levels of the principal warming gases (carbon dioxide, ozone, and black carbon); and (2) minimal emissions of sulfates, aerosols, and organic carbon from on-road transportation sources to counterbalance warming with cooling effects. Scientists find that cutting on-road transportation climate and air-pollutant emissions would be unambiguously good for the climate (and public health) in the near term. Transportation’s role in climate change is especially problematic, given the dependence on oil that characterizes this sector today. There are too few immediate mobility and fuel options in the United States beyond oil-fueled cars and trucks. U.S. and international policy makers have yet to tackle transportationclimate challenges. In its fourth assessment report, the Intergovernmental Panel on Climate Change (IPCC) found that the global transportation sector was responsible for the most rapid growth in direct greenhouse gas emissions, a 120 percent increase between 1970 and 2004. To further complicate matters, the IPCC projects that, without policy intervention, the rapidly growing global transportation sector has little motivation to change the way it operates, because consumer choices are trumping best practices. Herein lies a fundamental mismatch between the climate problem and solutions: transportation is responsible for nearly one of every three tons of greenhouse gas emissions but represents less than one of every twelve tons of projected emission reductions. Clearly this sector is a major contributor to climate change; therefore, it should be the focus of new policies to mitigate warming. Government must lead this effort as the market alone cannot precipitate the transition away from cars and oil, which dominate this sector.

#### Can’t solve developing countries

**Socolow and Glaser, 9** – Professor of Mechanical and Aerospace Engineering at Princeton University and Assistant Professor at the Woodrow Wilson School of Public and International Affairs and in the Department of Mechanical and Aerospace Engineering at Princeton University (Robert H. and Alexander, Fall. “Balancing risks: nuclear energy & climate change.” Dædalus Volume 138, Issue 4, pp. 31-44. MIT Press Journals.)

In this paper we consider a nuclear future where 1,500 GW of base load nuclear power is deployed in 2050. A nuclear fleet of this size would contribute about one wedge, if the power plant that would have been built instead of the nuclear plant has the average CO2 emissions per kilowatt hour of all operating plants, which might be half of the value for a coal plant. Base load power of 1,500 GW would contribute one fourth of total electric power in a business-as-usual world that produced 50,000 terawatt-hours (TWh) of electricity per year, two-and-a-half times the global power consumption. However, in a world focused on climate change mitigation, one would expect massive global investments in energy efficiency–more efficient motors, compressors, lighting, and circuit boards–that by 2050 could cut total electricity demand in half, relative to business as usual. In such a world, 1,500 GW of nuclear power would provide half of the power. We can get a feel for the geopolitical dimension of climate change mitigation from the widely cited scenarios by the International Energy Agency (iea) presented annually in its World Energy Outlook (weo), even though these now go only to 2030. The weo 2008 estimates energy, electricity, and CO2 emissions by region. Its 2030 world emits 40.5 billion tons of CO2, 45 percent from electric power plants. The countries of theOrganisation for Economic Co-operation and Development (oecd) emit less than one third of total global fossil fuel emissions and less than one third of global emissions from electric power production. By extrapolation, at midcentury the oecd could contribute only one quarter of the world’s greenhouse gas emissions. It is hard for Western analysts to grasp the importance of these numbers. The focus of climate change mitigation today is on leadership from the OECD countries, which are wealthier and more risk averse. But within a decade, the targets under discussion today can be within reach only if mitigation is in full gear in those parts of the developing world that share production and consumption patterns with the industrialized world. The map (see Figure 1) shows a hypothetical global distribution of nuclear power in the year 2050 based on a highnuclear scenario proposed in a widely cited mit report published in 2003. Three-fifths of the nuclear capacity in 2050 as stated in the mit report is located in the oecd, and more nuclear power is deployed in the United States in 2050 than in the whole world today. The worldview underlying these results is pessimistic about electricity growth rates for key developing countries, relative to many other sources. Notably, per capita electricity consumption in almost every developing country remains below 4,000 kWh per year in 2050, which is one-fifth of the assumed U.S. value for the same year. Such a ratio would startle many analysts today–certainly many in China. It is well within limits of credulity that nuclear power in 2050 could be nearly absent from the United States and the European Union and at the same time widely deployed in several of the countries rapidly industrializing today. Such a bifurcation could emerge, for example, if public opposition to nu clear power in the United States and Europe remains powerful enough to prevent nuclear expansion, while elsewhere, perhaps where modernization and geopolitical considerations trump other concerns, nuclear power proceeds vigorously. It may be that the United States and other countries of the oecd will have substantial leverage over the development of nuclear power for only a decade or so. Change will not happen overnight. Since 2006, almost 50 countries that today have no nuclear power plants have approached the International Atomic Energy Agency (iaea) for assistance, and many of them have announced plans to build one or more reactors by 2020. Most of these countries, however, are not currently in a good position to do so. Many face important technical and economic constraints, such as grid capacity, electricity demand, or gdp. Many have too few trained nuclear scientists and engineers, or lack an adequate regulatory framework and related legislation, or have not yet had a public debate about the rationale for the project. Overall, the iaea has estimated that “for a State with little developed technical base the implementation of the first [nuclear power plant] would, on average, take about 15 years.” 11 This lead time constrains rapid expansion of nuclear energy today. A wedge of nuclear power is, necessarily, nuclear power deployed widely– including in regions that are politically unstable today. If nuclear power is suf-ficiently unattractive in such a deployment scenario, nuclear power is not on the list of solutions to climate change.

#### Restrictions on nuclear exports block US competitiveness

NEI 12 (Nuclear Energy Institute, “U.S. Nuclear Export Rules Hurt Global Competitiveness,” Winter, http://www.nei.org/resourcesandstats/publicationsandmedia/insight/insightwinter2012/us-nuclear-export-rules-hurt-global-competitiveness/)

Fifty years ago, the United States was the global leader in nuclear technology and services, the first country to harness atoms for peace, and the first to profit from it internationally. Today, U.S. dominance of the global nuclear power market has eroded as suppliers from other countries compete aggressively against American exporters. U.S. suppliers confront competitors that benefit from various forms of state promotion and also must contend with a U.S. government that has not adapted to new commercial realities. The potential is tremendous—$500 billion to $740 billion in international orders over the next decade, representing tens of thousands of potential American jobs, according to the U.S. Department of Commerce. With America suffering a large trade deficit, nuclear goods and services represent a market worth aggressive action. However, antiquated U.S. government approaches to nuclear exports are challenging U.S. competitiveness in the nuclear energy market. New federal support is needed if the United States wants to reclaim dominance in commercial nuclear goods and services—and create the jobs that go with them. “The U.S. used to be a monopoly supplier of nuclear materials and technology back in the ’50s and ’60s,” said Fred McGoldrick, former director of the Office of Nonproliferation and Export Policy at the State Department. “That position has eroded to the point where we’re a minor player compared to other countries.” America continues to lead the world in technology innovation and know-how. So what are the issues? And where is the trade? Effective coordination among the many government agencies involved in nuclear exports would provide a boost to U.S. suppliers. “Multiple U.S. agencies are engaged with countries abroad that are developing nuclear power, from early assistance to export controls to trade finance and more,” said Ted Jones, director for supplier international relations at NEI. The challenge is to create a framework that allows commercial nuclear trade to grow while ensuring against the proliferation of nuclear materials. “To compete in such a situation, an ongoing dialogue between U.S. suppliers and government needs to be conducted and U.S. trade promotion must be coordinated at the highest levels,” Jones said. Licensing U.S. Exports Jurisdiction for commercial nuclear export controls is divided among the Departments of Energy and Commerce and the Nuclear Regulatory Commission and has not been comprehensively updated to coordinate among the agencies or to reflect economic and technological changes over the decades. The State Department also is involved in international nuclear commerce. It negotiates and implements so-called “123 agreements” that allow for nuclear goods and services to be traded with a foreign country. The federal agencies often have different, conflicting priorities, leading to a lack of clarity for exporters and longer processing times for export licenses. “The U.S. nuclear export regime is the most complex and restrictive in the world and the least efficient,” said Jones. “Furthermore, it is poorly focused on items and technologies that pose little or no proliferation concern. By trying to protect too much, we risk diminishing the focus on sensitive technologies and handicapping U.S. exports.” A case in point is the Energy Department’s Part 810 regulations. While 123 agreements open trade between the United States and other countries, Part 810 regulates what the United States can trade with another country. For certain countries, it can take more than a year to obtain “specific authorizations” to export nuclear items. Because other supplier countries authorize exports to the same countries with fewer requirements and delays, the Part 810 rules translate into a significant competitive disadvantage for U.S. suppliers.

#### Warming is irreversible

ANI 10 (“IPCC has underestimated climate-change impacts, say scientists”, 3-20, One India, http://news.oneindia.in/2010/03/20/ipcchas-underestimated-climate-change-impacts-sayscientis.html)

According to Charles H. Greene, Cornell professor of Earth and atmospheric science, "Even if all man-made greenhouse gas emissions were stopped tomorrow and carbon-dioxide levels stabilized at today's concentration, by the end of this century, the global average temperature would increase by about 4.3 degrees Fahrenheit, or about 2.4 degrees centigrade above pre-industrial levels, which is significantly above the level which scientists and policy makers agree is a threshold for dangerous climate change." "Of course, greenhouse gas emissions will not stop tomorrow, so the actual temperature increase will likely be significantly larger, resulting in potentially catastrophic impacts to society unless other steps are taken to reduce the Earth's temperature," he added. "Furthermore, while the oceans have slowed the amount of warming we would otherwise have seen for the level of greenhouse gases in the atmosphere, the ocean's thermal inertia will also slow the cooling we experience once we finally reduce our greenhouse gas emissions," he said. This means that the temperature rise we see this century will be largely irreversible for the next thousand years. "Reducing greenhouse gas emissions alone is unlikely to mitigate the risks of dangerous climate change," said Green.

#### **No resource wars**

Pinker 11 (Steven, Harvard College Professor and Johnstone Family Professor in the Department of Psychology – Harvard University, “The Better Angels of Our Nature: Why Violence Has Declined,” Google Books)

Once again it seems to me that the appropriate response is "maybe, but maybe not." Though climate change can cause plenty of misery and deserves to be mitigated for that reason alone, it will not necessarily lead to armed conflict. The political scientists who track war and peace, such as Halvard Buhaug, Idean Salehyan, Ole Theisen, and Nils Gleditsch, are skeptical of the popular idea that people fight wars over scarce resources. Hunger and resource shortages are tragically common in sub-Saharn countries such as Malawi, Zambia, and Tanzania, **but wars involving them are not**. Hurricanes, floods, droughts, and tsunamis (such as the disastrous one in the Indian Ocean in 2004) do not generally lead to armed conflict. The American dust bowl in the 1930s, to take another example, caused plenty of deprivation but no civil war. And while temperatures have been rising steadily in Africa during the past fifteen years, civil wars and war deaths have been falling. Pressures on access to land and water can certainly cause local skirmishes, but a genuine war requires that hostile forces be organized and armed, and that depends more on the influence of bad governments, closed economies, and militant ideologies than on the sheer availability of land and water. Certainly any connection to terrorism is in the imagination of the terror warriors: terrorists tend to be underemployed lower-middle-class men, not subsistence farmers. As for genocide, the Sudanese government finds it convenient to blame violence in Darfur on desertification, distracting the world from its own role in tolerating or encouraging the ethnic cleansing. In a regression analysis on armed conflicts from 1980 to 1992, Theisen found that conflict was more likely if a country was poor, populous, politically unstable, and abundant in oil, but not if it had suffered from droughts, water shortages, or mild land degradation. (Severe land degradation did have a small effect.) Reviewing analyses that examined a large number (N) of countries rather than cherry-picking one or two, he concluded, "those who foresee doom, because of the relationship between resource scarcity and violent internal conflict, have very little support in the large-N literature." Salehyan adds that relatively inexpensive advances in water use and agriculture practices in the developing world can yield massive increases in productivity with a constant or even shrinking amount of land, and that better governance can mitigate the human costs of environmental damage, as it does in developed democracies. Since the state of the environment is at most one ingredient in a mixture that depends far more on political and social organization, resource wars are far from inevitable, even in a climate-changed world.

#### Long timeframe and adaptation solves

Robert O. Mendelsohn 9, the Edwin Weyerhaeuser Davis Professor, Yale School of Forestry and Environmental Studies, Yale University, June 2009, “Climate Change and Economic Growth,” online: http://www.growthcommission.org/storage/cgdev/documents/gcwp060web.pdf

The heart of the debate about climate change comes from a number of warnings from scientists and others that give the impression that human-induced climate change is an immediate threat to society (IPCC 2007a,b; Stern 2006). Millions of people might be vulnerable to health effects (IPCC 2007b), crop production might fall in the low latitudes (IPCC 2007b), water supplies might dwindle (IPCC 2007b), precipitation might fall in arid regions (IPCC 2007b), extreme events will grow exponentially (Stern 2006), and between 20–30 percent of species will risk extinction (IPCC 2007b). Even worse, there may be catastrophic events such as the melting of Greenland or Antarctic ice sheets causing severe sea level rise, which would inundate hundreds of millions of people (Dasgupta et al. 2009). Proponents argue there is no time to waste. Unless greenhouse gases are cut dramatically today, economic growth and well‐being may be at risk (Stern 2006).

These statements are largely alarmist and misleading. Although climate change is a serious problem that deserves attention, society’s immediate behavior has an extremely low probability of leading to catastrophic consequences. The science and economics of climate change is quite clear that emissions over the next few decades will lead to only mild consequences. The severe impacts predicted by alarmists require a century (or two in the case of Stern 2006) of no mitigation. Many of the predicted impacts assume there will be no or little adaptation. The net economic impacts from climate change over the next 50 years will be small regardless. Most of the more severe impacts will take more than a century or even a millennium to unfold and many of these “potential” impacts will never occur because people will adapt. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long‐range climate risks. What is needed are long‐run balanced responses.

#### Alt cause- china

**Hale 11** (Thomas, PhD Candidate in the Department of Politics – Princeton University and a Visiting Fellow – LSE Global Governance, London School of Economics, “A Climate Coalition of the Willing,” Washington Quarterly, Winter, http://www.twq.com/11winter/docs/11winter\_Hale.pdf)

Intergovernmental efforts to limit the gases that cause climate change have all but failed. After the unsuccessful 2010 Copenhagen summit, and with little progress at the 2010 Cancun meeting, it is hard to see how major emitters will agree any time soon on mutual emissions reductions that are sufficiently ambitious to prevent a substantial (greater than two degree Celsius) increase in average global temperatures. It is not hard to see why. No deal excluding the United States and China, which together emit more than 40 percent of the world’s greenhouse gases (GHGs), is worth the paper it is written on. But domestic politics in both countries effectively block ‘‘G-2’’ leadership on climate. In the United States, the Obama administration has basically given up on national cap-and-trade legislation. Even the relatively modest Kerry-Lieberman-Graham energy bill remains dead in the Senate. The Chinese government, in turn, faces an even harsher constraint. Although the nation has adopted important energy efficiency goals, the Chinese Communist Party has staked its legitimacy and political survival on raising the living standard of average Chinese. Accepting international commitments that stand even a small chance of reducing the country’s GDP growth rate below a crucial threshold poses an unacceptable risk to the stability of the regime. Although the G-2 present the largest and most obvious barrier to a global treaty, they also provide a convenient excuse for other governments to avoid aggressive action. Therefore, the international community should not expect to negotiate a worthwhile successor to the Kyoto Protocol, at least not in the near future.

### Nuclear Leadership

#### Competitiveness is a myth

Bruno 9 [Isabelle, Lille Centre for Politics and Administration (CERAPS), University of Lille, The “Indefinite Discipline” of Competitiveness Benchmarking as a Neoliberal Technology of Government Minerva A Review of Science, Learning and Policy © Springer Science+Business Media B.V. 2009, 17 September 2009]

The pertinence of discussing the national competitiveness of a country is much debated among economists. In his now famous Foreign Affairs article, Paul Krugman criticized the “competitive metaphor”—i.e. the image “that, in the words of President Clinton, each nation is like a big corporation competing in the global marketplace” (1994, p. 29)—as economically meaningless, politically misguided and socially damaging. His demonstration countered the progressively established orthodoxy, which made the design of a “competitive state” consensual, desirable, and hence free of debate. More than economic nonsense, Krugman argued that it had in fact become a “dangerous obsession”: The idea that a country’s economic fortunes are largely determined by its success on world markets is a hypothesis, not a necessary truth; and as a practical, empirical matter, that hypothesis is flatly **wrong**. […] The growing obsession in most advanced nations with international competitiveness should be seen, not as a well-founded concern, but as a view held in the face of **overwhelming contrary evidence.** And yet it is clearly a view that people very much want to hold – a desire to believe that is reflected in a remarkable tendency of those who preach the doctrine of competitiveness to support their case with **careless, flawed arithmetic**. (Krugman 1994, p. 30)

#### Heg doesn’t solve war

**Fettweis 10** (Christopher J. Professor of Political Science at Tulane, Dangerous Times-The International Politics of Great Power Peace, pg. 175-6)

If the only thing standing between the world and chaos is the US military presence, then an adjustment in grand strategy would be exceptionally counter-productive. But it is worth recalling that none of the other explanations for the decline of war – nuclear weapons, complex economic interdependence, international and domestic political institutions, evolution in ideas and norms – necessitate an activist America to maintain their validity. Were American to become more restrained, nuclear weapons would still affect the calculations of the would be aggressor; the process of globalization would continue, deepening the complexity of economic interdependence; the United Nations could still deploy peacekeepers where necessary; and democracy would not shrivel where it currently exists. More importantly,the idea that war is a worthwhile way to resolve conflict would have no reason to return. As was argued in chapter 2, normative evolution is typically unidirectional. Strategic restraint in such a world be virtually risk free.

#### The US will block South Korean ENR now

Chul, 12 – senior fellow at the Institute for Peace & Cooperation (Lee Byong, 10/8. “South Korea eschews enrichment of uranium.” Japan Times, http://www.japantimes.co.jp/text/eo20121008a4.html)

South Korean officials have recently realized that the United States is likely to try to forbid them from enriching uranium and expanding their country's missile range, rather than leave these issues on the diplomatic back burner. Indeed, recent discreet talks, in which the U.S. has disregarded South Korean efforts to supplement the controversial U.S.-South Korea Nuclear Cooperation Agreement, which expires in March 2014, suggest that there are reasons to be deeply worried about the alliance's future. American negotiators — the reluctant midwives of South Korea's increasing responsibility in the field of atomic energy — remain steadfast in their opposition to South Korea's drive for improved defensive capabilities and a more advanced energy policy, despite the potential strategic benefits. U.S. nonproliferation experts do not anticipate progress on South Korea's efforts to win support for its preferred policies until the U.S. gains more leverage. Such a stalemate is not new. Nuclear talks between the two countries have often been characterized by poor communication and a lack of understanding. While South Korean officials rarely say in public what they really think, it is widely believed that U.S. policymakers have little motivation to reconcile with South Korea's government right now — they would prefer to stifle South Korea's increasingly loud demands. In the U.S.-South Korea relationship's heyday, American politicians considered the country an "extended arm of America." Such condescension may have been defensible when South Korea's military dictatorship needed America's political protection and security guarantee, but now the country is a beacon of democracy in East Asia. So, while South Koreans understand the need for compromise and cooperation, they believe that the time is right for a more balanced partnership. This belief does not imply South Korean cynicism about nonproliferation. Rather, it reflects concern about a nuclear North Korea, compounded by anxiety over the recent U.S.-Japan missile-defense accord. Given that the U.S. and South Korea have the same assessment of the intelligence regarding North Korea's nuclear progress, not to mention South Korea's vulnerability, their failure to reach a practical agreement is troubling. Former Deputy Foreign Minister Chun Yung Woo warned an American official in 2010 that revising the Nuclear Cooperation Agreement could soon become a "defining issue" in South Korea-U.S. relations, and that it was already attracting "significant amounts of negative press attention." Given South Korea's status as one of the world's top five nuclear-power producers, Chun argued, the South Korean public would not tolerate the perception that Japan was receiving preferential treatment. Indeed, rightwing leaders like Rep. Chung Mong Joon of the governing Saenuri Party have been vocal in expressing their doubts about South Korea's current denuclearization policy, suggesting that a nuclear weapons program could prevent a second war on the peninsula. The conservatives seem to believe that American nuclear protection for South Korea is a thing of the past. Despite their hawkish approach to North Korea's nuclear threats, South Korean officials know that uranium enrichment and spent-fuel reprocessing remains only a distant possibility. As a result, they are approaching negotiations skeptically, rather than emphasizing the sense of mutual obligation that should characterize the alliance. Their pessimism is hardly groundless, given that the United Arab Emirates has already signed a similar agreement with the U.S. declaring that it would not produce nuclear fuel. Indeed, South Korean negotiators appear convinced that they will not be able to make any headway with the U.S. on the issue. (To be sure, this failure may not matter much, given South Korean scientists' past declaration that they will not contribute to any nuclear program that could be used for military purposes.)

#### IFR’s guarantee reprocessing

Lovins 9 (Amory B., Chair and Chief Scientist – Rocky Mountain Institute, “’New’ Nuclear Reactors: Same Old Story,” Nuclear Monitor 690, 6-26, http://www.nirs.org/factsheets/lovinsonifretc.pdf)

As this becomes evident, other kinds of reactors are being proposed instead--novel designs that claim to solve LWRs’ problems of economics, proliferation, and waste. Even climate-protection pioneer Jim Hansen says these “Generation IV” reactors merit rapid R&D. But on closer examination, the two kinds most often promoted -Integral Fast Reactors (IFRs) and thorium reactors--reveal no economic, environmental, or security rationale, and the thesis is unsound for any nuclear reactor. Integrated Fast Reactors (IFRs) The IFR--a pool-type, liquid-sodium cooled fast-neutron reactor plus an ambitious new nuclear fuel cycle--was abandoned in 1994, and General Electric’s S-PRISM design in 2003, due to both proliferation concerns and dismal economics. Federal funding for fast breeder reactors halted in 1983, but in the past few years, enthusiasts got renewed Bush Administration support by portraying the IFR as a solution to proliferation and nuclear waste. It’s neither. Fast reactors were first offered as a way to make more plutonium to augment and ultimately replace scarce uranium. Now that uranium and enrichment are known to get cheaper while reprocessing, cleanup, and nonproliferation get costlier--destroying the economic rationale--IFRs have been reframed as a way to destroy the plutonium (and similar transuranic elements) in long-lived radioactive waste. Two or three redesigned IFRs could in principle fission the plutonium produced by each four LWRs without making more net plutonium. However, most LWRs will have retired before even one commercialsize IFR could be built; LWRs won’t be replaced with more LWRs because they’re grossly uncompetitive; and IFRs with their fuel cycle would cost even more and probably be less reliable. It is feasible today to “burn” plutonium in LWRs, but this isn’t done much because it’s very costly, makes each kg of spent fuel 7x hotter, enhances risks, and makes certain transuranic isotopes that complicate operation. IFRs could do the same thing with similar or greater problems, offering no advantage over LWRs in proliferation resistance, cost, or environment. IFRs’ reprocessing plant, lately reframed a “recycling center,” would be built at or near the reactors, coupling them so neither works without the other. Its novel technology, re-placing solvents and aqueous chemistry with high-temperature pyrometallurgy and electro refining, would incur different but major challenges, greater technical risks and repair problems, and speculative but probably worse economics. (Argonne National Laboratory, the world’s experts on it, contracted to pyroprocess spent fuel from the EBRII--a small IFR-like test reactor shut down in 1994 --by 2035, at a cost DOE estimated in 2006 at approximately 50× today’s cost of fresh LWR fuel.) Reprocessing of any kind makes waste management more difficult and complex, increases the volume and diversity of waste streams, increases by several--to manifold the cost of nuclear fueling, and separates bomb-usable material that can’t be adequately measured or protected. Mainly for this last reason, all U.S. Presidents since Gerald Ford in 1976 (except G.W. Bush in 2006–08) discouraged it. An IFR/pyroprocessing system would give any country immediate access to over a thousand bombs’ worth of plutonium to fuel it, facilities to recover that plutonium, and experts to separate and fabricate it into bomb cores--hardly a path to a safer world.

#### That causes a loss of credibility in negotiations- causes ENR

Sagan, 11 – professor of political science at Stanford University and co-chair of the Global Nuclear Future Initiative (Scott, 3/18. The International Security Implications of U.S. Domestic Nuclear Power Decisions,” http://cybercemetery.unt.edu/archive/brc/20120621005012/http://brc.gov/sites/default/files/documents/sagan\_brc\_paper\_final.pdf)

A similar phenomenon occurs when policy makers and scholars underestimate the international effect of the U.S. decision to abandon plutonium reprocessing in the 1970s. Skeptics claim that the fact that France and Japan, especially, went forward with their ambitious plutonium reprocessing efforts somehow demonstrates that U.S. efforts to constrain the global growth were a failure. But a more appropriate standard (but again more difficult to measure) for assessing our influence would estimate the number of states that would have developed plutonium reprocessing capabilities if the U.S. had not actively discouraged such fuel cycle activities after Jimmy Carter’s April 1997 order to cancel construction of commercial breeder reactors that employed a closed fuel cycle with plutonium reprocessing. The primary motivation behind the decision to postpone the development of this technology was a concern for the proliferation implications of the U.S. use of a closed fuel cycle. 17 The Carter administration reasoned that the decision to end reprocessing in the U.S. would have two effects: first, the U.S. could no longer act as an exporter of related technologies, limiting their availability; and second, it would create a normative change that would redefine the behavior of a responsible nuclear power state. Because we are estimating a counterfactual condition, it is not possible to measure definitively the effects of the Carter policy on the actual spread of reprocessing facilities around the world. Of the twenty-one countries that at some point in their history pursued plutonium reprocessing, ten have finished large-scale facilities and use them today: U.S., China, Israel, France, UK, India, Japan, Pakistan, Russia, and North Korea. 18 Algeria and the Czech Republic have a pilot-scale reprocessing plants, but have not moved towards further industrial development. 19 Nine countries abandoned their reprocessing programs: South Korea, Taiwan, Germany, Iraq, Italy, Argentina, Brazil, Belgium, and Yugoslavia. 20 The causes of these reversal decisions were complex, but in many of the cases U.S. diplomatic pressure was an important factor and that pressure was made more credible and acceptable because the U.S had given up its own civilian plutonium reprocessing programs. This “credibility” factor continues to be important today. South Korea is lobbying to renegotiate its agreements with the U.S. to be able to develop “pyro-processing,” a form of spent fuel reprocessing that supporters claim poses fewer proliferation risks than standard PUREX acqueous reprocessing. While this appears a challenge to the claim that the U.S. policy has had a positive influence, the very fact that the South Koreans are actively arguingthat pyro-processing – unlike the PUREX process – does not separate out plutonium shows their awareness of the power of the norm against developing such technologies. While the U.S. government initially cooperated with South Korea on pyroprocessing research, Richard Stratford (Director of the Office of Nuclear Energy Affairs in the Bureau of Nonproliferation, U. S. Department of State) recently stated that the technology “moved to the point that the product is dangerous from a proliferation point of view,” and that the DOE now “states frankly and positively that pyro-processing is reprocessing.” The U.S. government position against pyro-processing in South Korea today is made more credible by the fact that the U.S. does not reprocess spend fuel for commercial purposes. 21

#### South Korean ENR turns nuclear leadership – turns both advantages

Keck, 12 – assistant editor of The Diplomat (Zachary, 8/22. “Rough Waters? The State of the ROK-U.S. Alliance.” http://thediplomat.com/flashpoints-blog/2012/08/22/rough-waters-the-state-of-the-rok-u-s-alliance/)

Washington’s concerns over South Korean’s nuclear ambitions have only been heightened by Seoul’s latest campaign to acquire indigenous enrichment and reprocessing facilities, which it is proscribed from doing under a nuclear pact it signed with Washington in 1974. In contrast, the U.S. has signed agreements recognizing Japan’s reprocessing and enrichment rights as well as India’s de facto reprocessing capability. Now, with the U.S. and South Korea renegotiating the 1974 nuclear pact that will expire in 2014, South Korea has demanded that Washington acquiesce to Seoul building enrichment and processing facilities. South Korea’s immediate interest in acquiring these capabilities is not nuclear weapons but rather further expanding its nuclear energy industry at home and abroad. Nonetheless, the U.S. has rejected South Korea’s request thus far, with President Obama’s top proliferation adviser, Garry Samore, telling South Korean reporters last month, “There is no danger that Korean industry will not be able to get access to low enriched uranium," Washington has a number of reasons to oppose South Korea’s request, many of which have nothing to do with Seoul. For instance, a key component of President Obama’s nuclear security agenda is the goal of securing all nuclear materials worldwide within four years. Allowing South Korea to begin producing its own fissile materials would run counter to this goal and undercut the administration’s important successes in reducing the number of countries that possess and produce these materials. Allowing South Korea to build these facilities would also undermine the current U.S.-led campaign to persuade Iran to abandon its own enrichment facilities. It would also adversely affect a number of U.S. objectives in the Asia-Pacific, including persuading Pyongyang to surrender its own nuclear program, according Japan a heightened status among U.S. allies, and keeping Southeast Asia’s budding nuclear energy programs on their current peaceful trajectories. Under the surface, however, Washington’s opposition is likely due in part to its uncertainty over South Korea’s long-term nuclear intentions. As noted above, South Korea already has a history of covertly seeking nuclear arms. That this took place before Seoul became a democracy is cold comfort to the U.S given that South Koreans have at times been overwhelming in favor of their country acquiring nuclear weapons. In other words, at a time when the region is undergoing sweeping changes, the U.S. is increasingly less confident that South Korea will continue to rely on Washington for its security indefinitely. Indeed, there are already a number of signs that Seoul is seeking greater autonomy. These come at a time when the U.S. will need South Korea more than ever in order to properly rebalance its forces in the region.

#### New nuclear reactors drive up electricity prices

Cooper 9 (Mark, SENIOR FELLOW FOR ECONOMIC ANALYSIS INSTITUTE FOR ENERGY AND THE ENVIRONMENT VERMONT LAW SCHOOL, "THE ECONOMICS OF NUCLEAR REACTORS: RENAISSANCE OR RELAPSE?," http://www.vermontlaw.edu/Documents/Cooper%20Report%20on%20Nuclear%20Economics%20FINAL%5B1%5D.pdf)

Within the past year, estimates of the cost of nuclear power from a new generation of reactors have ranged from a low of 8.4 cents per kilowatt hour (kWh) to a high of 30 cents. This paper tackles the debate over the cost of building new nuclear reactors, with the key findings as follows: • The initial cost projections put out early in today’s so–called “nuclear renaissance” were about one–third of what one would have expected, based on the nuclear reactors completed in the 1990s. • The most recent cost projections for new nuclear reactors are, on average, over four times as high as the initial “nuclear renaissance” projections. • There are numerous options available to meet the need for electricity in a carbon–constrained environment that are superior to building nuclear reactors. Indeed, nuclear reactors are the worst option from the point of view of the consumer and society. • The low carbon sources that are less costly than nuclear include efficiency, cogeneration, biomass, geothermal, wind, solar thermal and natural gas. Solar photovoltaics that are presently more costly than nuclear reactors are projected to decline dramatically in price in the next decade. Fossil fuels with carbon capture and storage, which are not presently available, are projected to be somewhat more costly than nuclear reactors. • Numerous studies by Wall Street and independent energy analysts estimate efficiency and renewable costs at an average of 6 cents per kilowatt hour, while the cost of electricity from nuclear reactors is estimated in the range of 12 to 20 cents per kWh. • The additional cost of building 100 new nuclear reactors, instead of pursuing a least cost efficiency–renewable strategy, would be in the range of $1.9–$4.4 trillion over the life the reactors. Whether the burden falls on ratepayers (in electricity bills) or taxpayers (in large subsidies), incurring excess costs of that magnitude would be a substantial burden on the national economy and add immensely to the cost of electricity and the cost of reducing carbon emissions.

#### Turns their competitiveness arguments

Perry 12 (Mark, Prof of Economics @ Univ. of Michigan, "America's Energy Jackpot: Industrial Natural Gas Prices Fall to the Lowest Level in Recent History," http://mjperry.blogspot.com/2012/07/americas–energy–jackpot–industrial.html)

Building petrochemical plants could suddenly become attractive in the United States. Manufacturers will "reshore" production to take advantage of low natural gas and electricity prices. Energy costs will be lower for a long time, giving a competitive advantage to companies that invest in America, and also helping American consumers who get hit hard when energy prices spike. After years of bad economic news, the natural gas windfall is very good news. Let's make the most of it." The falling natural gas prices also make the predictions in this December 2011 study by PriceWaterhouseCoopers, "Shale gas: A renaissance in US manufacturing?"all the more likely: U.S. manufacturing companies (chemicals, metals and industrial) could employ approximately one million more workers by 2025 because of abundant, low–priced natural gas. Lower feedstock and energy cost could help U.S. manufacturers reduce natural gas expenses by as much as $11.6 billion annually through 2025. MP: As I have emphasized lately, America's ongoing shale–based energy revolution is one of the real bright spots in an otherwise somewhat gloomy economy, and provides one of the best reasons to be bullish about America's future. The shale revolution is creating thousands of well–paying, shovel–ready jobs in Texas, North Dakota and Ohio, and thousands of indirect jobs in industries that support the shale boom (sand, drilling equipment, transportation, infrastructure, steel pipe, restaurants, etc.). In addition, the abundant shale gas is driving down energy prices for industrial, commercial, residential and electricity–generating users, which frees up billions of dollars that can be spent on other goods and services throughout the economy, providing an energy–based stimulus to the economy. Cheap natural gas is also translating into cheaper electricity rates, as low–cost natural gas displaces coal. Further, cheap and abundant natural gas is sparking a manufacturing renaissance in energy–intensive industries like chemicals, fertilizers, and steel. And unlike renewable energies like solar and wind, the natural gas boom is happening without any taxpayer–funded grants, subsidies, credits and loans. Finally, we get an environmental bonus of lower CO2 emissions as natural gas replaces coal for electricity generation. Sure seems like a win, win, win, win situation to me.

#### Unipolarity is conflict prone

Montiero 12 [Nuno P. Monteiro is Assistant Professor of Political Science at Yale University, “Unrest Assured: Why Unipolarity is Not Peaceful”, International Security, Vol. 36, No. 3 (Winter 2011/12), pp. 9–40, Chetan]

**Wohlforth claims not only that the unipole can stave off challenges and preclude major power rivalries, but also that it is able to prevent conflicts among other states** and create incentives for them to side with it. 39 The unipole’s advantage is so great that it can settle any quarrel in which it intervenes. **As Wohlforth writes, “For as long as unipolarity obtains....second-tier states are less likely to engage in conflict-prone rivalries** for security or prestige. Once the sole pole takes sides, there can be little doubt about which party will prevail.” 40 This is the core logic of Wohlforth’s argument that unipolarity is peaceful. But what specifically does his argument say about each of the six possible kinds of war I identified in the previous section? Clearly, great power war is impossible in a unipolar world. In Wohlforth’s famous formulation: “Two states measured up in 1990. One is gone. No new pole has appeared: 2 1 1.” 41 Furthermore, by arguing that unipolarity precludes hegemonic rivalries, Wohlforth makes no room for wars between the sole great power and major powers. These are, according to him, the two main reasons why a unipolar world is peaceful. Unipolarity, he writes, “means the absence of two big problems that bedeviled the statesmen of past epochs: hegemonic rivalry and balance-of-power politics among major powers.” 42 I agree with Wohlforth on these two points, but they are only part of the picture. Granted, the absence of great power wars is an important contribution toward peace, but great power competition—and the conflict it might engender—would signal the emergence of one or more peer competitors to the unipole, and thus indicate that a transition to a bipolar or multipolar system was already under way. In this sense, great power conflict should be discussed within the context of unipolar durability, not unipolar peace. Indeed, including this subject in discussions of unipolar peacefulness parallels the mistakes made in the debate about the Cold War bipolar system. Then, arguments about how the two superpowers were unlikely to fight each other were often taken to mean that the system was peaceful. This thinking ignored the possibility of wars between a superpower and a lesser state, as well as armed conflicts among two or more lesser states, often acting as great power proxies. 43 In addition, **Wohlforth claims that wars among major powers are unlikely**, because the unipole will prevent conflict from erupting among important states. He writes, “The sole pole’s power advantages matter only to the degree that it is engaged, and it is most likely to be engaged in politics among the other major powers. 44 I agree that if the unipole were to pursue a strategy of defensive dominance, major power wars would be unlikely. Yet, there is no compelling reason to expect that it will always follow such a course. Should the unipole decide to disengage, as Wohlforth implies, major power wars would be possible. At the same time, Wohlforth argues that the unipole’s power preponderance makes the expected costs of balancing prohibitive, leading minor powers to bandwagon. This is his explanation for the absence of wars between the sole great power and minor powers. But, as I show, the costs of balancing relative to bandwagoning vary among minor powers. So Wohlforth’s argument underplays the likelihood of this type of war. Finally, Wohlforth’s argument does not exclude all kinds of war. **Although power preponderance allows the unipole to manage conflicts globally, this argument is not meant to apply to relations between major and minor powers,** or among the latter. As Wohlforth explains, his argument “applies with less force to potential security competition between regional powers, or between a second-tier state and a lesser power with which the system leader lacks close ties.” 45 Despite this caveat, Wohlforth does not fully explore the consequences of potential conflict between major and minor powers or among the latter for his view that unipolarity leads to peace. **How well**, then, **does the argument that unipolar systems are peaceful account for the first two decades of unipolarity** since the end of the Cold War? Table 1 presents a list of great powers divided into three periods: 1816 to 1945, multipolarity; 1946 to 1989, bipolarity; and since 1990, unipolarity. 46 Table 2 presents summary data about the incidence of war during each of these periods. **Unipolarity is the most conflict prone of all the systems, according to** at least **two important criteria: the percentage of years that great powers spend at war and the incidence of war involving great powers**. In multipolarity, 18 percent of great power years were spent at war. In bipolarity, the ratio is 16 percent. **In unipolarity**, however, **a remarkable 59 percent of great power years** until now **were spent at war**. This is by far the highest percentage in all three systems. Furthermore, **during** periods of **multipolarity and bipolarity, the probability that war** involving a great power **would break out in any given year was, respectively, 4.2 percent and 3.4 percent. Under unipolarity, it is 18.2 percent**—or more than four times higher. 47 **These figures provide no evidence that unipolarity is peaceful**. 48 In sum, the argument that unipolarity makes for peace is heavily weighted toward interactions among the most powerful states in the system. This should come as no surprise given that Wohlforth makes a structural argument: peace flows from the unipolar structure of international politics, not from any particular characteristic of the unipole. 49 Structural **analyses of the international system are usually centered on interactions between great powers**. 50 As Waltz writes, “The theory, like the story, of international politics is written in terms of the great powers of an era.” 51 In the sections that follow, however, I show that **in the case of unipolarity, an investigation of its peacefulness must consider** potential **causes of conflict beyond interactions between the most important states in the system.**

#### Heg is resilient

Wohlforth 7 (William, Professor of Government – Dartmouth College, “Unipolar Stability”, Harvard International Review, Spring, http://hir.harvard.edu/articles/1611/3/)

US military forces are stretched thin, its budget and trade deficits are high, and the country continues to finance its profligate ways by borrowing from abroad—notably from the Chinese government. These developments have prompted many analysts to warn that the United States suffers from “imperial overstretch.” And if US power is overstretched now, the argument goes, unipolarity can hardly be sustainable for long. The problem with this argument is that it fails to distinguish between actual and latent power. One must be careful to take into account both the level of resources that can be mobilized and the degree to which a government actually tries to mobilize them. And how much a government asks of its public is partly a function of the severity of the challenges that it faces. Indeed, one can never know for sure what a state is capable of until it has been seriously challenged. Yale historian Paul Kennedy coined the term “imperial overstretch” to describe the situation in which a state’s actual and latent capabilities cannot possibly match its foreign policy commitments. This situation should be contrasted with what might be termed “self-inflicted overstretch”—a situation in which a state lacks the sufficient resources to meet its current foreign policy commitments in the short term, but has untapped latent power and readily available policy choices that it can use to draw on this power. This is arguably the situation that the United States is in today. But the US government has not attempted to extract more resources from its population to meet its foreign policy commitments. Instead, it has moved strongly in the opposite direction by slashing personal and corporate tax rates. Although it is fighting wars in Afghanistan and Iraq and claims to be fighting a global “war” on terrorism, the United States is not acting like a country under intense international pressure. Aside from the volunteer servicemen and women and their families, US citizens have not been asked to make sacrifices for the sake of national prosperity and security. The country could clearly devote a greater proportion of its economy to military spending: today it spends only about 4 percent of its GDP on the military, as compared to 7 to 14 percent during the peak years of the Cold War. It could also spend its military budget more efficiently, shifting resources from expensive weapons systems to boots on the ground. Even more radically, it could reinstitute military conscription, shifting resources from pay and benefits to training and equipping more soldiers. On the economic front, it could raise taxes in a number of ways, notably on fossil fuels, to put its fiscal house back in order. No one knows for sure what would happen if a US president undertook such drastic measures, but there is nothing in economics, political science, or history to suggest that such policies would be any less likely to succeed than China is to continue to grow rapidly for decades. Most of those who study US politics would argue that the likelihood and potential success of such power-generating policies depends on public support, which is a function of the public’s perception of a threat. And as unnerving as terrorism is, there is nothing like the threat of another hostile power rising up in opposition to the United States for mobilizing public support. With **latent power** in the picture, it becomes clear that unipolarity might have more built-in **self-reinforcing mechanisms** than many analysts realize. It is often noted that the rise of a peer competitor to the United States might be thwarted by the counterbalancing actions of neighboring powers. For example, China’s rise might push India and Japan closer to the United States—indeed, this has already happened to some extent. There is also the strong possibility that a peer rival that comes to be seen as a threat would create strong incentives for the United States to end its self-inflicted overstretch and **tap** potentially **large wellsprings of** latent **power**.

#### Rising powers don’t cause war

**Ikenberry 11** – (May/June issue of Foreign Affairs, G. John, PhD, Albert G. Milbank Professor of Politics and International Affairs at Princeton University in the Department of Politics and the Woodrow Wilson School of Public and International Affairs, “The Future of the Liberal World Order,” http://www.foreignaffairs.com/ articles/67730/g-john-ikenberry/the-future-of-the-liberal-world-order?page=show DH)

Pronouncements of American decline miss the real transformation under way today. What is occurring is not American decline but a dynamic process in which other states are catching up and growing more connected. In an open and rule-based international order, this is what happens. If the architects of the postwar liberal order were alive to see today's system, they would think that their vision had succeeded beyond their wildest dreams. Markets and democracy have spread. Societies outside the West are trading and growing. The UnitedStates has more alliance partners today than it did during the Cold War. Rival hegemonic states with revisionist and illiberal agendas have been pushed off the global stage. It is difficult to read these world-historical developments as a story of American decline and liberal unraveling. In a way, however, the liberal international order has sown the seeds of its own discontent, since, paradoxically, the challenges facing it now -- the rise of non-Western states and new transnational threats -- are artifacts of its success. But the solutions to these problems -- integrating rising powers and tackling problems cooperatively -- will lead the order's old guardians and new stakeholders to an agenda of renewal. The coming divide in world politics will not be between the United States (and the West) and the non-Western rising states. Rather, the struggle will be between those who want to renew and expand today's system of multilateral governance arrangements and those who want to move to a less cooperative order built on spheres of influence. These fault lines do not map onto geography, nor do they split the West and the non-West. There are passionate champions of the UN, the WTO, and a rule-based international order in Asia, and there are isolationist, protectionist, and anti-internationalist factions in the West. The liberal international order has succeeded over the decades because its rules and institutions have not just enshrined open trade and free markets but also provided tools for governments to manage economic and security interdependence. The agenda for the renewal of the liberal international order should be driven by this same imperative: to reinforce the capacities of national governments to govern and achieve their economic and security goals. As the hegemonic organization of the liberal international order slowly gives way, more states will have authority and status. Butthis will still be a world that the United States wants to inhabit. A wider array of states will share the burdens of global economic and political governance, and with its worldwide system of alliances, the United States will remain at the center of the global system. Rising states do not just grow more powerful on the global stage; they grow more powerful within their regions, and this creates its own set of worries and insecurities -- which is why states will continue to look to Washington for security and partnership. In this new age of international order, the United States will not be able to rule. But it can still lead.

## 2NC – Case, K

### Long Timeframe 2NC

#### The demonstration project alone takes a decade – can’t solve fast enough to solve the energy crisis

ANS 5 (American Nuclear Society, “Fast Reactor Technology: A Path to Long-Term Energy Sustainability.” November, http://www.ans.org/pi/ps/docs/ps74.pdf)

Reaping the full benefits of fast reactor technology will take a decade or more for a demonstration reactor, followed by buildup of a fleet of operating power stations. For now and in the intermediate-term future, the looming short-term energy shortage must be met by building improved, proven thermal-reactor power plants. To assure longer-term energy sustainability and security, the American Nuclear Society sees a need for cooperative international efforts with the goal of building a fast reactor demonstration unit with onsite reprocessing of spent fuel.

### General Framing 2NC

#### View their ev w/ skepticism – nuclear lobby are hacks.

Todhunter 9/14 [Colin, Global Research, Nuclear Power: The Energy of Protest. The Future could be Renewable September 14, 2012 http://www.globalresearch.ca/nuclear-power-the-energy-of-protest-the-future-could-be-renewable/?utm\_source=rss&utm\_medium=rss&utm\_campaign=nuclear-power-the-energy-of-protest-the-future-could-be-renewable]

Proliferation concerns aside, the role that the powerful pro-nuclear lobby plays in shaping the debate about nuclear energy should not be underestimated. The US Nuclear Energy Institute (NEI) is described by Dr Helen Caldicott as the propaganda wing for the US nuclear industry, which spends millions of dollars annually to engineer public opinion. The NEI forwards the message that nuclear energy is clean, safe and cheap and in promoting this message has often attacked opponents and targeted legislators and policy makers via ‘independent’ reports, phoney claims and ‘donations’. Journalism Professor Karl Grossman of the State University of New York suggests the misinformation from General Electric and Westinghouse, the ‘Coke and Pepsi’ of the nuclear industry (who will incidentally both benefit enormously from India’s lucrative, multi billion dollar expanding nuclear sector), have made the money put into PR and lobbying by the tobacco companies appear miniscule. Perhaps such a level of spending and propaganda is not surprising because Harvey Wasserman, writer and activist, says this is an industry that can’t solve its waste problems, can’t operate without leaking radiation, can’t pay for itself and can’t get private insurance against terror or error.

### IFR’s Not Solve – 2NC Framing

#### IFR’s are like every new reactor in history – costlier, slower, and less feasible than claimed on paper – view their evidence with a high degree of skepticism, empirics are on our side

Lovins, 9 – co-founder, chairman and chief scientist of Rocky Mountain Institute (Amory B, 3/21. ““New” nuclear reactors, same old story.” http://www.rmi.org/Knowledge-Center/Library/2009-07\_NuclearSameOldStory)

No new kind of reactor is likely to be much, if at all, cheaper than today’s LWRs, which remain grossly uncompetitive and are getting more so despite five decades of maturation. “New reactors” are precisely the “paper reactors” Admiral Rickover described in 1953:

An academic reactor or reactor plant almost always has the following basic characteristics: (1) It is simple. (2) It is small. (3) It is cheap. (4) It is light. (5) It can be built very quickly. (6) It is very flexible in purpose. (7) Very little development will be required. It will use off-the-shelf components. (8) The reactor is in the study phase. It is not being built now.

On the other hand a practical reactor can be distinguished by the following characteristics: (1) It is being built now. (2) It is behind schedule. (3) It requires an immense amount of development on apparently trivial items. (4) It is very expensive. (5) It takes a long time to build because of its engineering development problems. (6) It is large. (7) It is heavy. (8) It is complicated.

*Every* new type of reactor in history has been costlier, slower, and harder than projected. IFRs’ low pres­sure, different safety profile, high temperature, and potentially higher thermal efficiency (if its helium turbines didn’t misbehave as they have in all previous reactor projects) come with countervailing disadvantages and costs that advocates assume away, contrary to all experience.

### Doesn’t Solve 2NC

#### Nuclear doesn’t solve warming –

#### A) Not cost-competitive and can’t produce enough hydrogen

Ahearne et al, 12 – adjunct scholar for Resources for the Future and an adjunct professor of engineering at Duke University (John F, February. Federation of American Scientists. “The Future of Nuclear Power in the United States.” http://www.fas.org/pubs/\_docs/Nuclear\_Energy\_Report-lowres.pdf)

In response to mitigating climate change, many countries will ﬁnd that nuclear power is neither the least-cost nor the quickest approach to reducing carbon dioxide emissions.1 Until nuclear energy is able to produce hydrogen or process heat, or until transportation sectors are electriﬁed, nuclear energy’s potential contribution to reducing carbon dioxide emissions will be somewhat limited.

#### B) Takes too long and can’t reduce emissions

**Madsen and Dutzik, 9** – Policy Analyst at Frontier Group and senior policy analyst with Frontier Group (Travis and Tony, November. With Bernadette Del Chiaro and Rob Sargent of the Environment America Research & Policy Center. “Generating Failure: How Building Nuclear Power Plants Would Set America Back in the Race Against Global Warming.” http://www.environmentamerica.org/sites/environment/files/reports/Generating-Failure---Environment-America---Web\_0.pdf)

Building 100 new nuclear reactors would happen too slowly to reduce global warming pollution in the near-term, and would actually increase the scale of emission cuts required in the future. At best, the nuclear industry could have a new reactor up and running by 2016, assuming that construction could be completed in four years. This pace would be faster than 80 to 95 percent of all reactors completed during the last wave of reactor construction in the United States. 70 If construction follows historical patterns, it could take nine years after a license is issued before the first reactor is up and running – into the 2020s. Under this very plausible scenario, new nuclear power could make no contribution toward reducing U.S. emissions of global warming pollution by 2020 – despite the investment of hundreds of billions of dollars for the construction of nuclear power plants. And even if the industry completed 100 new reactors by 2030, which is highly unlikely, these reactors would reduce cumulative power plant emissions of carbon dioxide over the next two decades by only 12 percent below business as usual, when a reduction of more than 70 percent is called for. In other words, 100 new nuclear reactors would be too little, too late to successfully meet our goals for limiting the severity of global warming.

#### IFRs too costly and too long term to solve warming – also trades off with short-term renewable tech that solves better

Cochran 9 (Thomas, Senior Scientist, Nuclear Program, Natural Resources Defense Council, “Senate Energy and Natural Resources Committee Hearing; To receive testimony on nuclear energy development; Testimony by Thomas Cochran, Senior Scientist, Nuclear Program, Natural Resources Defense Council” March 18, 2009, Congressional Documents and Publications)

B. Spent Fuel Reprocessing. The federal government should not encourage or support commercial spent fuel reprocessing. Putting aside for the moment the serious proliferation and security concerns involved in any future global shift toward reprocessing, it's clear that combating climate change is an urgent task that requires near term investments yielding huge decarbonization dividends on a 5 to 20 year timescale. For thermal reactors, the closed fuel cycle (spent fuel reprocessing and recycling plutonium) is unlikely ever to be less costly than the once-through fuel cycle, even assuming significant carbon controls. But setting aside such near-term cost barriers, commercial viability for a closed fuel cycle employing fast reactors is an even longer-term proposition. So even fervent advocates of nuclear power need to put the reprocessing agenda aside for a few decades, and focus on swiftly deploying and improving the low-carbon energy solutions. Think about it. In pursuit of closing the fuel cycle, the U.S. government could easily spend on the order of $ 150 billion over 15 years just to get to the starting line of large-scale commercialization. But all that spending will not yield one additional megawatt of low-carbon electricity beyond what could be obtained by sticking with the current once-through cycle, much less by investing that $150 billion in renewable and efficient energy technologies. Spent-fuel reprocessing, plutonium recycle, and fast reactor waste transmutation are currently uneconomical, higher-risk, 100-year answers to an urgent climate question that now requires low-risk 5 to 20 year solutions. For now, Congress and the new Administration should terminate funding for the Global Nuclear Energy Partnership (GNEP) and its associated efforts to close the nuclear fuel cycle and introduce fast burner reactors in the United States. At any point along the way, Mr. Chairman, we can revisit this issue to assess whether there may be truly disruptive innovations in nuclear technology that would alter this negative assessment, and induce us to view closing the fuel cycle as a more costeffective pathway to decarbonization than the host of cheaper alternatives we have available to us today.

### 2NC Irreversible

#### 6 degree warming’s inevitable

AP 9 (Associated Press, Six Degree Temperature Rise by 2100 is Inevitable: UNEP, September 24, <http://www.speedy-fit.co.uk/index2.php?option=com_content&do_pdf=1&id=168>)

Earth's temperature is likely to jump six degrees between now and the end of the century even if every country cuts greenhouse gas emissions as proposed, according to a United Nations update. Scientists looked at emission plans from 192 nations and calculated what would happen to global warming. The projections take into account 80 percent emission cuts from the U.S. and Europe by 2050, which are not sure things. The U.S. figure is based on a bill that passed the House of Representatives but is running into resistance in the Senate, where debate has been delayed by health care reform efforts. Carbon dioxide, mostly from the burning of fossil fuels such as coal and oil, is the main cause of global warming, trapping the sun's energy in the atmosphere. The world's average temperature has already risen 1.4 degrees since the 19th century. Much of projected rise in temperature is because of developing nations, which aren't talking much about cutting their emissions, scientists said at a United Nations press conference Thursday. China alone adds nearly 2 degrees to the projections. "We are headed toward very serious changes in our planet," said Achim Steiner, head of the U.N.'s environment program, which issued the update on Thursday. The review looked at some 400 peer-reviewed papers on climate over the last three years. Even if the developed world cuts its emissions by 80 percent and the developing world cuts theirs in half by 2050, as some experts propose, the world is still facing a 3-degree increase by the end of the century, said Robert Corell, a prominent U.S. climate scientist who helped oversee the update. Corell said the most likely agreement out of the international climate negotiations in Copenhagen in December still translates into a nearly 5-degree increase in world temperature by the end of the century. European leaders and the Obama White House have set a goal to limit warming to just a couple degrees. The U.N.'s environment program unveiled the update on peer-reviewed climate change science to tell diplomats how hot the planet is getting. The last big report from the Nobel Prize-winning Intergovernmental Panel on Climate Change came out more than two years ago and is based on science that is at least three to four years old, Steiner said. Global warming is speeding up, especially in the Arctic, and that means that some top-level science projections from 2007 are already out of date and overly optimistic. Corell, who headed an assessment of warming in the Arctic, said global warming "is accelerating in ways that we are not anticipating." Because Greenland and West Antarctic ice sheets are melting far faster than thought, it looks like the seas will rise twice as fast as projected just three years ago, Corell said. He said seas should rise about a foot every 20 to 25 years.

#### Low threshold—less than 2 degrees is sufficient to cause their impacts

Harvey 11 (Fiona, Environment Reporter – Guardian, 11/9, “World headed for irreversible climate change in five years, IEA warns,” <http://www.guardian.co.uk/environment/2011/nov/09/fossil-fuel-infrastructure-climate-change>)

Climate scientists estimate that global warming of 2C above pre-industrial levels marks the limit of safety, beyond which climate change becomes catastrophic and irreversible. Though such estimates are necessarily imprecise, warming of as little as 1.5C could cause dangerous rises in sea levels and a higher risk of extreme weather – the limit of 2C is now inscribed in international accords, including the partial agreement signed at Copenhagen in 2009, by which the biggest developed and developing countries for the first time agreed to curb their greenhouse gas output.

#### Too little, too late

Harris 9 (Richard, Science Reporter for National Public Radio, Peabody Award Winner, American Association for the Advancement of Science Journalism Award, “Global Warming Irreversible, Study Says,” January 26th, NPR, http://www.npr.org/templates/story/story.php?storyId=99888903)

Climate change is essentially irreversible, according to a sobering new scientific study. As carbon dioxide emissions continue to rise, the world will experience more and more long-term environmental disruption. The damage will persist even when, and if, emissions are brought under control, says study author Susan Solomon, who is among the world's top climate scientists. "We're used to thinking about pollution problems as things that we can fix," Solomon says. "Smog, we just cut back and everything will be better later. Or haze, you know, it'll go away pretty quickly." That's the case for some of the gases that contribute to climate change, such as methane and nitrous oxide. But as Solomon and colleagues suggest in a new study published in the Proceedings of the National Academy of Sciences, it is not true for the most abundant greenhouse gas: carbon dioxide. Turning off the carbon dioxide emissions won't stop global warming. "People have imagined that if we stopped emitting carbon dioxide that the climate would go back to normal in 100 years or 200 years. What we're showing here is that's not right. It's essentially an irreversible change that will last for more than a thousand years," Solomon says. This is because the oceans are currently soaking up a lot of the planet's excess heat — and a lot of the carbon dioxide put into the air. The carbon dioxide and heat will eventually start coming out of the ocean. And that will take place for many hundreds of years.

#### It’s irreversible - it’s too late to stop the greenhouse effect

Harris 9 (Richard, Science Reporter for National Public Radio, Peabody Award Winner, American Association for the Advancement of Science Journalism Award, “Global Warming Irreversible, Study Says,” January 26th, NPR, http://www.npr.org/templates/story/story.php?storyId=99888903)

Climate change is essentially irreversible, according to a sobering new scientific study. As carbon dioxide emissions continue to rise, the world will experience more and more long-term environmental disruption. The damage will persist even when, and if, emissions are brought under control, says study author Susan Solomon, who is among the world's top climate scientists. "We're used to thinking about pollution problems as things that we can fix," Solomon says. "Smog, we just cut back and everything will be better later. Or haze, you know, it'll go away pretty quickly." That's the case for some of the gases that contribute to climate change, such as methane and nitrous oxide. But as Solomon and colleagues suggest in a new study published in the Proceedings of the National Academy of Sciences, it is not true for the most abundant greenhouse gas: carbon dioxide. Turning off the carbon dioxide emissions won't stop global warming. "People have imagined that if we stopped emitting carbon dioxide that the climate would go back to normal in 100 years or 200 years. What we're showing here is that's not right. It's essentially an irreversible change that will last for more than a thousand years," Solomon says. This is because the oceans are currently soaking up a lot of the planet's excess heat — and a lot of the carbon dioxide put into the air. The carbon dioxide and heat will eventually start coming out of the ocean. And that will take place for many hundreds of years.

#### It’s too late—Earth’s fate is sealed

Adve 8 [Nagraj. Staffer for the South Asia News. “Can We Avoid ‘Dangerous’ Global Warming” One World South Asia News, 23 April 08. Lexis]

As a consequence, the Earth’s average temperature has risen about 0.8 degrees C since the Industrial Revolution, reaching 14.5 degrees C in 2005. This seemingly mild rise has already caused lands to be nibbled by rising sea levels in the Sunderbans and the Gujarat coast, the 2005 floods in Bombay which killed a thousand people, Himalayan glaciers to recede, and rainfall patterns to change. According to the UN, 66 million people were affected by floods this year in South Asia alone. What used to seem ‘natural’ phenomena are not natural any more, as Bill McKibben lamented in The End of Nature nearly 20 years ago. The problem, as Paul Brown explains in Global Warming: The Last Chance for Change, is that there’s more warming in the pipeline. There’s a lag of about 25-30 years between greenhouse gases being emitted and the full effects of their warming. So the recent climate chaos is actually the consequence of emissions in the late 1970s. The full effects of more recent emissions, including from China’s coal-based power stations that some are suddenly and rightly concerned about, will be felt in the years to come. We are committed, Brown writes, to a further 0.7 degrees C. That would add up to 1.5 degrees C above pre-industrial levels. At 1.5 degrees, 18% of the world’s species will die, and 400 million more people worldwide will be exposed to water stress. It gets worse. As the Earth gets warmer, it will trigger off certain ‘feedbacks’, which could be understood as the Earth’s systems themselves contributing to warming: as Arctic ice melts, there will be less of it to reflect heat, warming further, melting

### 2NC No XTC

#### Adaptation solves catastrophic impacts to warming

Goklany 11 -- PhD, author and researcher associated with IPCC, expert reviewer and U.S. delegate to that organization (Dr. Indur M., 12/11, "Misled on Climate Change: How the UN IPCC (and others) Exaggerate the Impacts of Global Warming," http://goklany.org/library/Reason%20CC%20and%20Development%202011.pdf)

So how much of a difference in impact would consideration of both economic development and technological change have made? If impacts were to be estimated for five or so years into the future, ignoring changes in adaptive capacity between now and then probably would not be fatal because neither economic development nor technological change would likely advance substantially during that period. However, the time horizon of climate change impact assessments is often on the order of 35–100 years or more. The Fast Track Assessments use a base year of 1990 to estimate impacts for 2025, 2055 and 2085. 39 The Stern Review’s time horizon extends to 2100– 2200 and beyond. 40 Over such periods one ought to expect substantial advances in adaptive capacity due to increases in economic development, technological change and human capital. As already noted, retrospective assessments indicate that over the span of a few decades, changes in economic development and technologies can substantially reduce, if not eliminate, adverse environmental impacts and improve human well-being, as measured by a variety of objective indicators. 41 Thus, not fully accounting for changes in the level of economic development and secular technological change would understate future adaptive capacity, which then could overstate impacts by one or more orders of magnitude if the time horizon is several decades into the future. The assumption that there would be little or no improved or new technologies that would become available between 1990 and 2100 (or 2200), as assumed in most climate change impact assessments, is clearly naïve. In fact, a comparison of today’s world against the world of 1990 (the base year used in most impacts studies to date) shows that even during this brief 20-year span, this assumption is invalid for many, if not most, human enterprises. Since 1990, for example, the portion of the developing world’s population living in absolute poverty declined from 42% to 25%, 42 and in sub-Saharan Africa Internet users increased from 0 to 50 million, while cellular phone users went from 0 per 100 to 33 per 100. 43 It should be noted that some of the newer impacts assessments have begun to account for changes in adaptive capacity. For example, the CIESIN study of 2006, in an exercise exploring the vulnerability to climate change under various climate change scenarios, allowed adaptive capacity to increase between the present and 2050 and 2100. 44 However, the researchers arbitrarily limited any increase in adaptive capacity to “either the current global mean or to a value that is 25% higher than the current value—whichever is higher.” 45 Such a limitation would, for example, have missed most of the increase in U.S. adaptive capacity during the twentieth century that virtually eliminated death and disease from climate-sensitive water-borne vector diseases. More recently, another study analyzed the sensitivity of deaths from malaria, diarrhea, schistosomiasis and dengue fever to warming, economic development and other determinants of adaptive capacity through the year 2100. 46 The results indicate, unsurprisingly, that economic development alone could reduce mortality substantially. For malaria, for instance, deaths would be eliminated before 2100 in a number of the more affluent sub-Saharan countries. 47

#### Experts agree

Hsu 10 (Jeremy, Live Science Staff, July 19, pg. <http://www.livescience.com/culture/can-humans-survive-extinction-doomsday-100719.html>)

His views deviate sharply from those of most experts, who don't view climate change as the end for humans. Even the worst-case scenarios discussed by the Intergovernmental Panel on Climate Change don't foresee human extinction. "The scenarios that the mainstream climate community are advancing are not end-of-humanity, catastrophic scenarios," said Roger Pielke Jr., a climate policy analyst at the University of Colorado at Boulder. Humans have the technological tools to begin tackling climate change, if not quite enough yet to solve the problem, Pielke said. He added that doom-mongering did little to encourage people to take action. "My view of politics is that the long-term, high-risk scenarios are really difficult to use to motivate short-term, incremental action," Pielke explained. "The rhetoric of fear and alarm that some people tend toward is counterproductive." Searching for solutions One technological solution to climate change already exists through carbon capture and storage, according to Wallace Broecker, a geochemist and renowned climate scientist at Columbia University's Lamont-Doherty Earth Observatory in New York City. But Broecker remained skeptical that governments or industry would commit the resources needed to slow the rise of carbon dioxide (CO2) levels, and predicted that more drastic geoengineering might become necessary to stabilize the planet. "The rise in CO2 isn't going to kill many people, and it's not going to kill humanity," Broecker said. "But it's going to change the entire wild ecology of the planet, melt a lot of ice, acidify the ocean, change the availability of water and change crop yields, so we're essentially doing an experiment whose result remains uncertain."

#### Warming will be slow, there’s no impact, and adaptation solves

William Yeatman 9, Energy Policy Analyst at the Competitive Enterprise Institute, February 3, 2009, “Global Warming 101: Science,” online: <http://www.globalwarming.org/2009/02/03/global-warming-101-science/>

A “planetary emergency—a crisis that threatens the survival of our civilization and the habitability of the Earth”—that is how former Vice President Al Gore describes global warming. Most environmental groups preach the same message. So do many journalists. So do some scientists.

In fact, at the 2008 annual meeting of Nobel Prize winners in Lindau, Germany, half the laureates on the climate change panel disputed the so-called consensus on global warming.

You have probably heard the dire warnings many times. Carbon dioxide (CO2) from mankind’s use of fossil fuels like coal, oil, and natural gas is building up in the atmosphere. Carbon dioxide is a greenhouse gas—it traps heat that would otherwise escape into outer space. Al Gore warns that global warming caused by carbon dioxide emissions could increase sea levels by 20 feet, spin up deadly hurricanes. It could even plunge Europe into an ice age.

Science does not support these and other scary predictions, which Gore and his allies repeatedly tout as a “scientific consensus.” Global warming is real and carbon dioxide emissions are contributing to it, but it is not a crisis. Global warming in the 21 st century is likely to be modest, and the net impacts may well be beneficial in some places. Even in the worst case, humanity will be much better off in 2100 than it is today.

The following is a summary of key points:

Average Annual Heat-Related Mortality: People will not drop like flies from heat waves in a warming world. Heat-related mortality will continue to decline as the world warms.

Far more people die each year from excess cold than from excess heat.

Global warming will not make air pollution worse.

Global warming will not lead to malaria epidemics in Northern Hemisphere countries.

Contrary to Gore, no “strong, new scientific consensus is emerging” that global warming is making hurricanes stronger.

Global Death & Death Rates Due to Extreme Events, 1900-2004: Since the 1920s, death rates related to extreme weather declined by more than 98 percent globally. The impression conveyed by An Inconvenient Truth—that global warming is making the world a more dangerous place—is false.

Gore’s warning that global warming could shut down the Atlantic branch of the oceanic thermohaline circulation (THC) and plunge Europe into an ice age is science fiction.

Gore’s warning that sea levels could rise by 20 feet is science fiction. Sea level rise in the 21 st century is likely to be measured in inches, not in feet.

The world warmed at a rate of 0.17°C per decade since 1978, according to the temperature record compiled by the United Nations Intergovernmental Panel on Climate Change (IPCC). Since most climate models predict that warming will occur at a constant—that is, non-accelerating—rate, it is reasonable to expect that global warming in the 21 st century will be close to the low end of the IPCC’s forecast range, of 1.4°C to 5.8°C.

The actual warming rate may be only half the 0.17°C per decade rate implied in the IPCC temperature record, because the IPCC has not adequately filtered out the warming biases from local factors like urbanization and improper management of monitoring equipment.

A warming near the low end of the IPCC range would produce both benefits—longer growing seasons, more rainfall, fewer cold deaths—and harms—more heat waves, more drought, some acceleration of sea level rise—but nothing resembling catastrophe.

Even in the IPCC high-end warming forecasts, human welfare would improve dramatically over the next 100 years. In the IPCC fossil-fuel-intensive development scenario, per capita GDP in developing countries increases from $875 per year in 1990 to $43,000 per year in 2100—even after taking into account an additional 110 years of global warming. Even in the IPCC worst-case scenario, global warming is not the civilization-ending catastrophe Al Gore purports it to be.

#### Previous temperature spikes disprove the impact

Singer 11 (S. Fred, Robert M. and Craig, PhD physics – Princeton University and professor of environmental science – UVA, consultant – NASA, GAO, DOE, NASA, Carter, PhD paleontology – University of Cambridge, adjunct research professor – Marine Geophysical Laboratory @ James Cook University, and Idso, PhD Geography – ASU, “Climate Change Reconsidered,” 2011 Interim Report of the Nongovernmental Panel on Climate Change)

Research from locations around the world reveal a significant period of elevated air temperatures that immediately preceded the Little Ice Age, during a time that has come to be known as the Little Medieval Warm Period. A discussion of this topic was not included in the 2009 NIPCC report, but we include it here to demonstrate the existence of another set of real-world data that do not support the IPCC‘s claim that temperatures of the past couple of decades have been the warmest of the past one to two millennia. In one of the more intriguing aspects of his study of global climate change over the past three millennia, Loehle (2004) presented a graph of the Sargasso Sea and South African temperature records of Keigwin (1996) and Holmgren et al. (1999, 2001) that reveals the existence of a major spike in surface air temperature that began sometime in the early 1400s. This abrupt and anomalous warming pushed the air temperatures of these two records considerably above their representations of the peak warmth of the twentieth century, after which they fell back to pre-spike levels in the mid-1500s, in harmony with the work of McIntyre and McKitrick (2003), who found a similar period of higher-than-current temperatures in their reanalysis of the data employed by Mann et al. (1998, 1999).

#### No impact to warming

Idso and Idso 11 (Craig D., Founder and Chairman of the Board – Center for the Study of Carbon Dioxide and Global Change, and Sherwood B., President – Center for the Study of Carbon Dioxide and Global Change, “Carbon Dioxide and Earth’s Future Pursuing the Prudent Path,” February, <http://www.co2science.org/education/reports/> prudentpath/prudentpath.pdf)

As presently constituted, earth’s atmosphere contains just slightly less than 400 ppm of the colorless and odorless gas we call carbon dioxide or CO2. That’s only four-hundredths of one percent. Consequently, even if the air's CO2 concentration was tripled, carbon dioxide would still comprise only a little over one tenth of one percent of the air we breathe, which is far less than what wafted through earth’s atmosphere eons ago, when the planet was a virtual garden place. Nevertheless, a small increase in this minuscule amount of CO2 is frequently predicted to produce a suite of dire environmental consequences, including dangerous global warming, catastrophic sea level rise, reduced agricultural output, and the destruction of many natural ecosystems, as well as dramatic increases in extreme weather phenomena, such as droughts, floods and hurricanes. As strange as it may seem, these frightening future scenarios are derived from a single source of information: the ever-evolving computer-driven climate models that presume to reduce the important physical, chemical and biological processes that combine to determine the state of earth’s climate into a set of mathematical equations out of which their forecasts are produced. But do we really know what all of those complex and interacting processes are? And even if we did -- which we don't -- could we correctly reduce them into manageable computer code so as to produce reliable forecasts 50 or 100 years into the future? Some people answer these questions in the affirmative. However, as may be seen in the body of this report, real-world observations fail to confirm essentially all of the alarming predictions of significant increases in the frequency and severity of droughts, floods and hurricanes that climate models suggest should occur in response to a global warming of the magnitude that was experienced by the earth over the past two centuries as it gradually recovered from the much-lower-than-present temperatures characteristic of the depths of the Little Ice Age. And other observations have shown that the rising atmospheric CO2 concentrations associated with the development of the Industrial Revolution have actually been good for the planet, as they have significantly enhanced the plant productivity and vegetative water use efficiency of earth's natural and agro-ecosystems, leading to a significant "greening of the earth." In the pages that follow, we present this oft-neglected evidence via a review of the pertinent scientific literature. In the case of the biospheric benefits of atmospheric CO2 enrichment, we find that with more CO2 in the air, plants grow bigger and better in almost every conceivable way, and that they do it more efficiently, with respect to their utilization of valuable natural resources, and more effectively, in the face of environmental constraints. And when plants benefit, so do all of the animals and people that depend upon them for their sustenance. Likewise, in the case of climate model inadequacies, we reveal their many shortcomings via a comparison of their "doom and gloom" predictions with real-world observations. And this exercise reveals that even though the world has warmed substantially over the past century or more -- at a rate that is claimed by many to have been unprecedented over the past one to two millennia -- this report demonstrates that none of the environmental catastrophes that are predicted by climate alarmists to be produced by such a warming has ever come to pass. And this fact -- that there have been no significant increases in either the frequency or severity of droughts, floods or hurricanes over the past two centuries or more of global warming -- poses an important question. What should be easier to predict: the effects of global warming on extreme weather events or the effects of elevated atmospheric CO2 concentrations on global temperature? The first part of this question should, in principle, be answerable; for it is well defined in terms of the small number of known factors likely to play a role in linking the independent variable (global warming) with the specified weather phenomena (droughts, floods and hurricanes). The latter part of the question, on the other hand, is ill-defined and possibly even unanswerable; for there are many factors -- physical, chemical and biological -- that could well be involved in linking CO2 (or causing it not to be linked) to global temperature. If, then, today's climate models cannot correctly predict what should be relatively easy for them to correctly predict (the effect of global warming on extreme weather events), why should we believe what they say about something infinitely more complex (the effect of a rise in the air’s CO2 content on mean global air temperature)? Clearly, we should pay the models no heed in the matter of future climate -- especially in terms of predictions based on the behavior of a non-meteorological parameter (CO2) -- until they can reproduce the climate of the past, based on the behavior of one of the most basic of all true meteorological parameters (temperature). And even if the models eventually solve this part of the problem, we should still reserve judgment on their forecasts of global warming; for there will yet be a vast gulf between where they will be at that time and where they will have to go to be able to meet the much greater challenge to which they aspire

### 2NC Multi-Condo Good

**Condo’s good**

**1. Neg flex – can’t use kritiks and counterplans and test the aff from different angles**

**2. Information processing – multiple choices make for more tactile and harder debate – fosters 2ac tech skills**

**3. Real-world – policy-makers aren’t forced to stick to their opinions if they realize a flaw**

**[4. Research – sides have to learn a broader variety of issues instead of relying on generics**

**5. Checks new affs – neg needs to be able to test multiple options on the fly]**

**Counter-interpretation – we get** [INSERT] **– it’s a logical fixed limit that mitigates their offense**

**Not a voter –**

**[If going for] just a reason to stick us with the CP – solves 1AR allocation**

**[If not going for] just a reason conditional worlds should be banned – solves 1AR allocation**

**AT: Strat Skew**

**No reason we skewed you any more than disads, T, or impact turns would – our advocacies aren’t contradictory**

**AT: In-depth education**

**2NR checks – still gain education but are forced to think about time allocation too – eventually will come down to the best option**

**AT: Neg Bias**

**Aff has first and last speech, gets to pick the focus of the debate, and can go for a single dropped arg in the 2ar – this topic proves there is no predictable neg ground**

**AT: C/I – One Condo**

**Can’t solve either teams offense – means we can’t test new options on the fly and leads to staler debate**

**Arbitrary and self-serving – like saying you can cheat just not in the specific way you cheated in this debate – if theory is entirely offense/defense, then all of our offense is a linear disad**

**AT C/I – Dispo**

**Arbitrary and not real-world – forces us into random rules to stick us with advocacies, let’s the aff frame the debate**

### 2NC Overview

#### K outweighs the case

#### -- Magnitude -- logic of security created the most destructive features of the international system -- war, oppression, and ecological destruction are all inevitable when particular decisions become necessities. Try or die -- voting aff makes their impacts inevitable.

#### -- Turns case -- means we try to secure energy for our national interest – nuclear becomes a means of gaining geopolitical power – means we don't export to others because we're fraid they'll catch up

#### -- Independent impact – energy is appropriated for national security and becomes the equivalent of nuclear weapons – we start wars over energy with energy – your militarization of energy habituates war logic

#### -- Alt' solves case -- rejecting dominant political discourse challenges the root cause of violent identity construction, undermining the solar reason for war. It's a prerequisite to better policy-making and a matter of sequencing -- good theory now causes better action later.

### AT Owen

#### 1. No link – the K doesn’t wholesale reject all “rational choice theory”, it just rejects the aff’s specific policy because of the flaws isolated above and allows us to recreate a better political space in the future – our specific intellectual card is actually relevant evidence from that same article

#### 2. Owen concedes that epistemology and ontology are important and shape policies

Owen 2 (David, Reader of Political Theory at the Univ. of Southampton, Millennium, Vol 31, No 3, Sage)

 Commenting on the ‘philosophical turn’ in IR, Wæver remarks that ‘[a] frenzy for words like “epistemology” and “ontology” often signals this philosophical turn’, although he goes on to comment that these terms are often used loosely.4 However, loosely deployed or not, it is clear that debates concerning ontology and epistemology play a central role in the contemporary IR theory wars. In one respect, this is unsurprising since it is a characteristic feature of the social sciences that periods of disciplinary disorientation involve recourse to reflection on the philosophical commitments of different theoretical approaches, and there is no doubt that such reflection can play a valuable role in making explicit the commitments that characterise (and help individuate) diverse theoretical positions. Yet, such a philosophical turn is not without its dangers and I will briefly mention three before turning to consider a confusion that has, I will suggest, helped to promote the IR theory wars by motivating this philosophical turn.

**3. Out of context – Owen concludes inevitable confusion in IR causes his ‘vicious cycle’, not our critical interrogation**

Owen 2 (David, Reader of Political Theory at the Univ. of Southampton, Millennium, Vol 31, No 3, Sage)

[YELLOW]

 It should be noted that I am not claiming that such a vicious circle has been established in IR by virtue of the philosophical turn, nor am I claiming that IR is alone in its current exposure to this threat; on the contrary, Shapiro’s remarks are directed at (primarily North American) political science. I am simply concerned to point out that the philosophical turn in IR increases its exposure to these dangers and, hence, its vulnerability to the kind of vicious circle that they can, collectively, generate. Having specified these dangers, however, I want to turn to a confusion within much of IR that has, I will argue, acted to encourage this philosophical turn and so increase its exposure to these risks. As a preface to this task, though, it is useful to sketch out two main lines of debate within the IR theory wars; these are not the only lines of debate, but they are important ones.

### No War

#### War impacts should be ignored – war is entirely chaotic and unpredictable

Buchanan 2 (Mark, science writer who has worked on the editorial staff of Nature and as a features editor for New Scientist, Ph.D. in theoretical physics from the University of Virginia, Ubiquity: Why Catastrophes Happen, p. 62)

This book is not only about earthquakes. It is about ubiquitous patterns of change and organization that run through our world at all levels. I have begun with earthquakes and discussed them at some length only to illustrate a way of thinking and to introduce the remarkable dynamics of upheavals associated with the critical state, dynamics that we shall soon see at work in other settings. "When it comes to disastrous episodes of financial collapse, revolutions, or catastrophic wars, we all quite understandably long to identify the causes that make these things happen, so that we might avoid them in the future. But we shall soon find power laws in these settings as well, very possibly because the critical state underlies the dynamics of all of these different kinds of upheaval. It appears that, at many levels, our world is at all times tuned to be on the edge of sudden, radical change, and that these and other upheavals may all be strictly unavoidable and unforeseeable, even just moments before they strike. Consequently, our human longing for explanation may be terribly misplaced, and doomed always to go unsatisfied.

### Risk Calc

#### Prefer our disjunctive scenarios to their short-term conjunctive scenarios.

Eliezer **Yudkowsky**, 8/31/**2006**. Singularity Institute for Artificial Intelligence Palo Alto, CA. “Cognitive biases potentially affecting judgment of global risks,” Forthcoming in Global Catastrophic Risks, eds. Nick Bostrom and Milan Cirkovic, singinst.org/upload/cognitive-biases.pdf.

The conjunction fallacy similarly applies to futurological forecasts. Two independent sets of professional analysts at the Second International Congress on Forecasting were asked to rate, respectively, the probability of "A complete suspension of diplomatic relations between the USA and the Soviet Union, sometime in 1983" or "A Russian invasion of Poland, and a complete suspension of diplomatic relations between the USA and the Soviet Union, sometime in 1983". The second set of analysts responded with significantly higher probabilities. (Tversky and Kahneman 1983.) In Johnson et. al. (1993), MBA students at Wharton were scheduled to travel to Bangkok as part of their degree program. Several groups of students were asked how much they - 6 - were willing to pay for terrorism insurance. One group of subjects was asked how much they were willing to pay for terrorism insurance covering the flight from Thailand to the US. A second group of subjects was asked how much they were willing to pay for terrorism insurance covering the round-trip flight. A third group was asked how much they were willing to pay for terrorism insurance that covered the complete trip to Thailand. These three groups responded with average willingness to pay of $17.19, $13.90, and $7.44 respectively. According to probability theory, **adding additional detail onto a story must render the story less probable**. It is less probable that Linda is a feminist bank teller than that she is a bank teller, since all feminist bank tellers are necessarily bank tellers. Yet human psychology seems to follow the rule that adding an additional detail can make the story more plausible. People might pay more for international diplomacy intended to prevent nanotechnological warfare by China, than for an engineering project to defend against nanotechnological attack from any source. The second threat scenario is less vivid and alarming, but the defense is more useful because it is more vague. More valuable still would be strategies which make humanity harder to extinguish without being specific to nanotechnologic threats - such as colonizing space, or see Yudkowsky (this volume) on AI. Security expert Bruce Schneier observed (both before and after the 2005 hurricane in New Orleans) that the U.S. government was guarding specific domestic targets against "movie-plot scenarios" of terrorism, at the cost of taking away resources from emergency-response capabilities that could respond to any disaster. (Schneier 2005.) Overly detailed reassurances can also create false perceptions of safety: "X is not an existential risk and you don't need to worry about it, because A, B, C, D, and E"; where the failure of any one of propositions A, B, C, D, or E potentially extinguishes the human species. "We don't need to worry about nanotechnologic war, because a UN commission will initially develop the technology and prevent its proliferation until such time as an active shield is developed, capable of defending against all accidental and malicious outbreaks that contemporary nanotechnology is capable of producing, and this condition will persist indefinitely." **Vivid, specific scenarios can inflate our probability estimates of security**, as well as misdirecting defensive investments into needlessly narrow or implausibly detailed risk scenarios. More generally, people tend to overestimate conjunctive probabilities and underestimate disjunctive probabilities. (Tversky and Kahneman 1974.) That is, **people tend to overestimate the probability that**, e.g., **seven events of 90% probability will all occur**. Conversely, **people tend to underestimate the probability that at least one of seven events of 10% probability will occur**. Someone judging whether to, e.g., incorporate a new startup, must evaluate the probability that many individual events will all go right (there will be sufficient funding, competent employees, customers will want the product) while also considering the likelihood that at least one critical failure will occur (the bank refuses - 7 - a loan, the biggest project fails, the lead scientist dies). This may help explain why only 44% of entrepreneurial ventures3 survive after 4 years. (Knaup 2005.) Dawes (1988) observes: 'In their summations lawyers avoid arguing from disjunctions ("either this or that or the other could have occurred, all of which would lead to the same conclusion") in favor of conjunctions. Rationally, of course, disjunctions are much more probable than are conjunctions.' The scenario of humanity going extinct in the next century is a disjunctive event. It could happen as a result of any of the existential risks discussed in this book - or some other cause which none of us foresaw. Yet for a futurist, disjunctions make for an awkward and unpoetic-sounding prophecy.

### 2NC Energy Security

#### Energy security enables panoptic politics that pervade all aspects of daily lives

Ciuta 10 -- Lecturer in International Relations and Director of the Centre of European Politics, School of Slavonic and East European Studies @ University College London, UK (Felix, 2010, "Conceptual Notes on Energy Security: Total or Banal Security?" Security Dialogue 41(123), Sage)

At first glance, to state that energy ‘pervades every aspect of life’ (Ocheltree, 2008: 1) is commonsensical and seems unproblematic in security terms. On closer investigation, however, this view of energy has significant consequences. In the most immediate sense, energy modulates security by taking it everywhere, simply because energy is everywhere. This assertion alone – ‘security is everywhere’ – will startle students and practitioners of security, because it challenges one of their most fundamental assumptions: that security has precise boundaries that make it a domain reservé of specialist knowledge and practice (Bigo, 1998; Ciuta˘, 2009). But, what precisely does it mean that energy security is everywhere? To quote one proponent of this view, ‘energy security needs to be extended to the safety of the whole infrastructure and supply chain – recognizing the vulnerabilities that come from terrorism, war, brigandage, and natural disasters’ (Yergin, 2006b: 1). In conceptual terms, this statement identifies an ‘infinite number of targets’ (Kain, 2007) that are subject to an infinite number of vulnerabilities. Energy security means the security of everything: resources, production plants, transportation networks, distribution outlets and even consumption patterns; everywhere: oilfields, pipelines, power plants, gas stations, homes; against everything: resource depletion, global warming, terrorism, ‘them’ and ourselves. At its maximum, this logic invests every single object of any kind with and in security. At least potentially, 90 the result is a panoptic view of security that legitimates panoptic security policies (see Bigo, 1998). It is at this point that the totality of energy intersects and reinforces its reflexivity. Former NATO SACEUR General James L. Jones (2007: 2) might have intended to emphasize only the totality of energy when he argued that energy is ‘a national security issue as well as an international and family security issue’, but his statement draws attention to the potential of energy security to percolate down through to the most minute, banal and intimate aspects of our lives. Families are not only affected by energy security, but also produce energy insecurity – through consumption patterns, for example (Campbell, 2005) – and they can be security providers by the same means. The multiplication of actors signalled by the previous logic is thus pushed to the maximum, because all the myriad of actual and potential actors acquire simultaneously all possible security roles: they are at the same time referent objects, subjects, threats, vectors and agents of security. Thus, the call to broaden security becomes realized in paroxysmic manner. To paraphrase Dillon & Reid (2001: 58), energy security becomes ‘omnidirectional, omnisensorial, omniversal’.

#### That outweighs war

**Burke 2007** lecturer at Adelaide University School of History and Politics, “What security makes possible,” Working Paper 2007 p.11-12

Even if threats are credible and existential, I do not believe that they warrant invoking the ‘state of exception’, which has in our time been more commonly enacted in the detention and rendition of terrorism suspects, immigration detention centres and the use of arbitrary arrest and deportation powers. The ‘state of exception’ also haunts much legial innovation in counter-terrorism policy. And, as Agamben, Judith Butler and Arendt have argued, such approaches have their roots in processes (namely colonialism and the Holocaust) that systematically dehumanized their victims producing lives that were ‘bare’, ‘ungreivable’, ‘unliveable’ and ‘superfluous’. If nothing else, it ought to raise serious doubts as to how securitization theory can be helpful in resignifying security as emancipation. It also precludes the ability to speak of human or environmental security in terms consistent with democratic political processes in a state of normalacy. The existential threat of human beings may be real enough, but it should generate a very different policy logic than outlined by the Copenhagen School. As Rocanne Lynn Doty and Karin Fierke have argued, the Copenhagen School’s conceptualization blocks the path to human security. This would seem to be implicit in the way Waever, in his 1995 article, attempts to provide security with ontological grounding. There he states that ‘as concepts, neither individual nor international security exist’:

### 2NC Nuclear

#### You invoke a nuclear state of exception – enables authoritarian violence and turns the environment

Kaur 11 -- Senior Lecturer in University of Sussex, London, Anthropology, Centre for Migration Research (Dr. Raminder, 6/9/11, "A ‘Nuclear Renaissance’, Climate Change and the State of Exception," http://www.dianuke.org/a-%E2%80%98nuclear-renaissance%E2%80%99-climate-change-and-the-state-of-exception/)

Increasingly, nation-states such as China, France, Russia, Britain and India are promoting the nuclear option: firstly, as the main large-scale solution to developing economies, growing populations, and increasing demands for a consumer-led lifestyle, and secondly, in order to tend to environmental concerns of global warming and climate change.[i] India’s Prime Minister, Manmohan Singh, speaking at a conference of atomic scientists in Delhi, for instance, announced a hundred-fold increase to 470,000 megawatts of energy that could come from Indian nuclear power stations by 2050. He said, ‘This will sharply reduce our dependence on fossil fuels and will be a major contribution to global efforts to combat climate change, adding that Asia was seeing a huge spurt in “nuclear plant building” for these reasons (Ramesh 2009).The Fukushima nuclear reactor disaster of March 2011 has, for the time being at least, dented some nation-state’s nuclear power programmes. In India, however, the government has declared that it has commissioned further safety checks whilst continuing its nuclear development as before. Whilst the ‘carbon lobby’, including the fossil-fuels industries, stand to gain by undermining the validity of global warming, it appears that the ‘nuclear lobby’ benefits enormously from the growing body of evidence for human-based global warming. This situation has led to a significant nuclear renaissance with the promotion of nuclear power as ‘clean and green energy’. John Ritch, Director General of the World Nuclear Association, goes so far as to describe the need to embrace nuclear power as a ‘global and environmental imperative’, for ‘Humankind cannot conceivably achieve a global clean-energy revolution without a huge expansion of nuclear power’ (Ritch nd). To similar ends, India’s Union Minister of State for Environment and Forests, Jairam Ramesh, remarked, ‘It is paradoxical that environmentalists are against nuclear energy’ (Deshpande 2009). With a subtle sleight of hand, nuclear industries are able to promote themselves as environmentally beneficial whilst continuing business-as-usual at an expansive rate. Such global and national views on climate change are threatening to monopolise the entire environmentalist terrain where issues to do with uranium and thorium mining, the ecological costs of nuclear power plant construction, maintenance, operation and decommissioning, the release of water coolant, and the transport and storage of radioactive waste are held as subsidiary considerations to the threat of climate change. Basing much of my evidence in India, I note how the conjunction of nuclear power and climate change has lodged itself in the public imagination and is consequently in a powerful position, creating a ‘truth regime’ favoured both by the nuclear lobby and those defenders of climate change who want more energy without restructuration of market-influenced economies or changes in consumerist lifestyle. The urgency of climate change discourses further empower what I call the ‘nuclear state of exception’ which, in turn, lends credence to the veracity of human-centric global warming. The Nuclear State of Exception Although Giorgio Agamben’s (2005) work on the normalisation of exceptional state practice has been much cited, it would appear that Robert Jungk anticipated some of his main axioms. Jungk outlines how the extraordinary, as it pertains to the state’s possession of nuclear weapons and the development of atomic industries since the mid-1940s, became the ordinary (Jungk 1979: 58). When associated with nuclear weapons, the state operates under the guise of a paradigm of security which promises ‘peace’ in terms of a nuclear deterrence to other countries, and also legitimates the excesses of state conduct whilst abrogating citizens’ rights in the name of ‘national security’. Jungk adds that, in fact, state authoritarianism applied to all nation-states with nuclear industries: ‘Nuclear power was first used to make weapons of total destruction for use against military enemies, but today it even imperils citizens in their own country, because there is no fundamental difference between atoms for peace and atoms for war’ (Jungk 1979: vii). The inevitable spread of technological know-how through a range of international networks and the effects of the US’ ‘atoms for peace’ program in the 1950s led to a greater number of nations constructing institutions for civilian nuclear power, a development that was later realised to enable uranium enrichment for the manufacture of weapons. Due to the indeterminacy between atoms for peace and atoms for war, the nuclear industries began to play a key part in several nations’ security policies, both externally with reference to other states, and also internally with reference to objectors and suspected anti-national contingents. Jungk notes ‘the important social role of nuclear energy in the decline of the constitutional state into the authoritarian nuclear state’ by focusing on a range of indicators, including a report published by the American National Advisory Committee on Criminal Justice in 1977 which suggested that: in view of the ‘high vulnerability of technical civilization’, emergency legislation should be introduced making it possible temporarily to ignore constitutional safeguards without previous congressional debate or consultation with the Supreme Court. (1979: 135) The bio-techno-political mode of governance encapsulates subjects into its folds such that it becomes a ‘technical civilisation’ – a civilisation that, although promising favourable aspects of modernity to the populace and development for the country, is also to be accompanied by several risks to human and environmental safety that propel states including democracies further towards authoritarianism. ‘Big science’ – that is, science that is centralised or at least circumscribed by the state – and the bureaucracies surrounding it play a critical part in the normalisation of the state of exception, and the exercise of even more power over their citizens. Jungk elaborates on the routinisation of nuclear state violence, epistemological, juridical and physical: Such measures will be justified, not as temporary measures made necessary by an exceptional emergency … but by the necessity of providing permanent protection for a perpetually endangered central source of energy that is regarded as indispensable. A nuclear industry means a permanent state of emergency justified by a permanent threat. (1979: 135) This permanent state of emergency with respect to anything nuclear applies to restrictions on citizens’ freedom, the surveillance and criminalisation of critics and campaigners, the justification of the mobilisation of thousands of policemen and sometimes military to deal with peaceful demonstrators against nuclear power, and a hegemony on ‘truth-claims’ where the nuclear industries are held as the solution to growing power needs whilst advancing themselves as climate change environmentalists. In this way, power structures and lifestyles need not be altered where nuclear power becomes, ironically, a powerful mascot of ‘clean and green’ energy. In India, the capitalist modality of the nuclear state was exacerbated by the ratification of the Indo-US civilian nuclear agreement in 2008, a bilateral accord which enables those countries in the Nuclear Suppliers Group to provide material and technology for India’s civilian nuclear operations even though it is not a signatory to the Nuclear non-Proliferation Treaty. This has led to an expansion of the nuclear industries in the country where the limited indigenous resources of uranium could then be siphoned into the nuclear weapons industries. The imposition of the nuclear state hand-in-hand with multinational corporations in regions such as Koodankulam in Tamil Nadu (with the Russian nuclear company, Atomstroyexport), Haripur in West Bengal (with the Russian company, Rosatom) or Jaitapur in Maharashtra (with the French company, Areva), without due consultation with residents around the proposed nuclear power plants, has prompted S. P. Udayakumar (2009) to recall an earlier history of colonisation describing the contemporary scenario as an instance of ‘nucolonization (nuclear + colonization)’. The Indian nuclear state, with its especial mooring in central government, has conducted environmental enquiries primarily for itself – and this so in only a summary fashion. In a context where the Ministry of Environment and Forests can override the need for an Environmental Impact Assessment (EIA) report for the first two nuclear reactors at Koodankulam in 2001, saying that the decision was first made in the 1980s before the EIA Notification Act (1994); or where the Supreme Court of India can dismiss a petition against the construction of these reactors simply by saying: ‘There is no reason as to why this court should sit in appeal over the Governmental decision relating to a policy matter more so, when crores of rupees having [sic] been invested’ (cited in Goyal 2002), then there is a strong basis upon which to consider the Indian state as a whole as a nuclearised state – that is, a state wherein matters relating to nuclear issues are given inordinate leeway across the board. The nuclear enclave consisting of scientists, bureaucrats and politicians, is both the exception to and the rule that underpins the rest of state practice. So even though we may be talking about a domain of distinct governmental practice and political technology as encapsulated by the notion of a nuclear state, it is evident that its influence spreads beyond the nuclear domain in a discourse of nuclearisation through state-related stratagems which have become increasingly authoritarian and defence-orientated since the late 1990s. In a nutshell, discourses about the urgency of climate change, global warming, nuclear power and defence have converged in a draconian and oppressive manner that now parades itself as the necessary norm for the nation. Conclusion Despite their particularities, machinations of the Indian nuclear state are also notable elsewhere. Joseph Masco elaborates on the ‘national-security state’ in the USA (2008: 14). Tony Hall comments upon the ‘defence-dominated, well-cushioned [nuclear] industry’ in the UK (1996: 10). And on the recent issue of the construction of more nuclear power stations in Britain, David Ockwell observes that a public hearing was only undertaken for ‘instrumental reasons (i.e. it was a legal requirement), as demonstrated by a public statement by then prime minister Tony Blair that the consultation “won’t affect the policy at all”’ (2008: 264). These narratives are familiar across the board where a nuclear renaissance is apparent. But critics continue to dispute the hijacking of environmentalism by the state, and argue that if climate change is the problem, then nuclear power is by no means a solution. Moreover, the half-life of radioactive waste cannot be brushed away in a misplaced vindication of the saying, ‘out of sight, out of mind’.

### AT Perm – Do Both

#### 1. Cross-apply framework – the aff must prove there’s value in incorporating their discourse and epistemology. Testing competitiveness with the plan is nonsensical because our kritik is about their scholarship.

#### 2. Theory – permutations must include 1AC representations, they’re the majority of the opening speech. Severance makes the aff a moving target and being neg becomes impossible. The aff isn’t selected in a vacuum, they had infinite prep to select advantages they had defenses of.

#### 3. The plan cannot be detached from its discursive underpinnings

Anthony Burke, Senior Lecturer @ School of Politics & IR @ Univ. of New South Wales, ‘7 [*Beyond Security, Ethics and Violence*, p. 3-4]

These frameworks are interrogated at the level both of their theoretical conceptualisation and their practice: in their influence and implementation in specific policy contexts and conflicts in East and Central Asia, the Middle East and the 'war on terror', where their meaning and impact take on greater clarity. This approach is based on a conviction that the meaning of powerful political concepts cannot be abstract or easily universalised: they all have histories, often complex and conflictual; their forms and meanings change over time; and they are developed, refined and deployed in concrete struggles over power, wealth and societal form. While this should not preclude normative debate over how political or ethical concepts should be defined and used, and thus be beneficial or destructive to humanity, it embodies a caution that the meaning of concepts can never be stabilised or unproblematic in practice. Their normative potential must always be considered in relation to their utilisation in systems of political, social and economic power and their consequent worldly effects. Hence this book embodies a caution by Michel Foucault, who warned us about the 'politics of truth . . the battle about the status of truth and the economic and political role it plays', and it is inspired by his call to 'detach the power of truth from the forms of hegemony, social, economic and cultural, within which it operates at the present time'.1

It is clear that traditionally coercive and violent approaches to security and strategy are both still culturally dominant, and politically and ethically suspect. However, the reasons for pursuing a critical analysis **relate not only to the** most destructive or controversial approaches, such as the war in Iraq, **but also to their available** (and generally preferable) alternatives. There is a necessity to question not merely extremist versions such as the Bush doctrine, Indonesian militarism or Israeli expansionism, **but also their mainstream critique**s - whether they take the form **of liberal policy approaches** in international relations (IR), just war theory, US realism, optimistic accounts of globalisation, rhetorics of sensitivity to cultural difference, or centrist Israeli security discourses based on territorial compromise with the Palestinians. The surface appearance of lively (and often significant) debate masks a deeper agreement **about major concepts**, forms of political identity and the imperative to secure them. Debates about when and how it may be effective and legitimate to use military force in tandem with other policy options, for example, mask a more fundamental discursive consensus about the meaning of security, the effectiveness of strategic power, the nature of progress, the value of freedom or the promises of national and cultural identity. As a result, political and intellectual debate about insecurity, violent conflict and global injustice can become hostage to a claustrophic structure of political and ethical possibility that systematically **wards off critique.**

**4. Multiple perms are a VI – no risk option for the aff that demands lots of block time and are impossible to generate offense against, sandbags explanation to the 1AR screwing the neg, ci – they get 1 permutation.**

#### 5. Their initial framing precludes change – forgetting the 1AC is necessary

Bleiker 1 (Roland, Senior Lecturer and Co-Director – Rotary Centre of International Studies in Peace and Conflict Resolution, The Zen of International Relations, Ed. Chan, Mandeville, and Blieker, p. 38-39)

The power to tell stories is the power to define common sense. Prevalent IR stories have been told for so long that they no longer appear as stories. They are accepted as fact for their metaphorical dimensions have vanished from our collective memories. We have become accustomed to our distorting IR metaphors until we come to lie, as Nietzsche would say “herd-like in a style obligatory for all. As a result dominant ir stories have successfully transformed one specific interpretation of world political realities, the realist one, into reality per se. Realist perceptions of the international have gradually become accepted as common sense, to the point that any critique against them has to be evaluated in terms of an already existing and objectified world view. There are powerful mechanisms of control precisely in this ability to determine meaning and rationality. 'Defining common sense', Steve Smith argues, 'is the ultimate act of political power.’8 It separates the possible from the impossible and directs the theory and practice of international relations on a particular path. The prime objective of this essay is to challenge prevalent IR stories. The most effective way of doing so, the chapter argues, is not to critique but to forget them, to tell new stories that are not constrained by the boundaries of established and objectified IR narratives. Such an approach diverges from many critical engagements with world politics. Most challenges against dominant IR stories have been advanced in the form of critiques. While critiquing orthodox IR stories remains an important task, it is not sufficient. Exploring the origins of problems, in this case discourse of power politics and their positivist framing of the political practice, cannot overcome all the existing theoretical and practical dilemmas. By articulating critique in relation to arguments advanced by orthodox IR theory, the impact of critical voices remains confined within the larger discursive boundaries that have been established through the initial framing of debates. A successful challenge to orthodox IR stories must do more than merely critique their narrow and problematic nature. To be effective, critique must be supplemented with a process of forgetting the object of critique, of theorizing world politics beyond the agendas, issues and terminologies that are prest by orthodox debates. Indeed the most powerful potential of critical scholarship may well lie in the attempt to tell different stories about IR, for once theres stories have become validated , they may well open up spaces for a more inclusive and less violence prone practice of real world politics.

**Embedded in their 1ac discourse –**

### Link Wall

Calculating consumption –

1AC CX gives specific numbers and pretends to know all the answers -- Hansen -- "phase down total fossil fuel emissions by some specified percentage will not work" -- proves your calculated approach will fail

#### This technological enframing makes warming strategically even more dangerous.

**Crist ‘7** – Ass. Prof. Sci & Tech in Society @ VT (Eileen, Telos 141, Winter, Beyond the Climate Crisis)

While the dangers of climate change are real, I argue that there are **even greater dangers** in representing it as the most urgent problem we face. Framing climate change in such a manner deserves to be challenged for two reasons: it encourages the restriction of proposed solutions to the technical realm, by powerfully insinuating that the needed approaches are those that directly address the problem; and it detracts attention from the planet’s ecological predicament as a whole, by virtue of claiming the limelight for the one issue that trumps all others. Identifying climate change as the biggest threat to civilization, and ushering it into center stage as the highest priority problem, has bolstered the proliferation of technical proposals that address the specific challenge. The race is on for figuring out what technologies, or portfolio thereof, will solve “the problem.” Whether the call is for reviving nuclear power, boosting the installation of wind turbines, using a variety of renewable energy sources, increasing the efficiency of fossil-fuel use, developing carbon-sequestering technologies, or placing mirrors in space to deflect the sun’s rays, the narrow character of such proposals is evident: confront the problem of greenhouse gas emissions by technologically phasing them out, superseding them, capturing them, or mitigating their heating effects. In his The Revenge of Gaia, for example, Lovelock briefly mentions the need to face climate change by “changing our whole style of living.”16 But the thrust of this work, what readers and policy-makers come away with, is his repeated and strident call for investing in nuclear energy as, in his words, “the one lifeline we can use immediately.”17 In the policy realm, the first step toward the technological fix for global warming is often identified with implementing the Kyoto protocol. Biologist Tim Flannery agitates for the treaty, comparing the need for its successful endorsement to that of the Montreal protocol that phased out the ozone-depleting CFCs. “The Montreal protocol,” he submits, “marks a signal moment in human societal development, representing the first ever victory by humanity over a global pollution problem.”18 He hopes for a similar victory for the global climate-change problem. Yet the deepening realization of the threat of climate change, virtually in the wake of stratospheric ozone depletion, also suggests that dealing with global problems treaty-by-treaty is no solution to the planet’s predicament. Just as the risks of unanticipated ozone depletion have been followed by the dangers of a long underappreciated climate crisis, so it would be naïve not to anticipate another (perhaps even entirely unforeseeable) catastrophe arising after the (hoped-for) resolution of the above two. Furthermore, if greenhouse gases were restricted successfully by means of technological shifts and innovations, the **root cause** of the ecological crisis as a whole would remain unaddressed. The destructive patterns of production, trade, extraction, land-use, waste proliferation, and consumption, coupled with population growth, would go unchallenged, continuing to run down the integrity, beauty, and biological richness of the Earth. Industrial-consumer civilization has entrenched a form of life that admits virtually no limits to its expansiveness within, and perceived entitlement to, the entire planet.19 But questioning this civilization is by and large sidestepped in climate-change discourse, with its single-minded quest for a global-warming techno-fix.20 Instead of confronting the forms of social organization that are causing the climate crisis—among numerous other catastrophes—climate-change literature often focuses on how global warming is endangering the culprit, and agonizes over what technological means can save it from impending tipping points.21 The dominant frame of climate change funnels cognitive and pragmatic work toward specifically addressing global warming, while muting a host of equally monumental issues. Climate change looms so huge on the environmental and political agenda today that it has contributed to downplaying other facets of the ecological crisis: mass extinction of species, the devastation of the oceans by industrial fishing, continued old-growth deforestation, topsoil losses and desertification, endocrine disruption, incessant development, and so on, are made to appear secondary and more forgiving by comparison with “dangerous anthropogenic interference” with the climate system. In what follows, I will focus specifically on how climate-change discourse encourages the continued marginalization of the biodiversity crisis—a crisis that has been soberly described as a holocaust,22 and which despite decades of scientific and environmentalist pleas remains a virtual non-topic in society, the mass media, and humanistic and other academic literatures. Several works on climate change (though by no means all) extensively examine the consequences of global warming for biodiversity, 23 but rarely is it mentioned that biodepletion predates dangerous greenhouse-gas buildup by decades, centuries, or longer, and will not be stopped by a technological resolution of global warming. Climate change is poised to exacerbate species and ecosystem losses—indeed, is doing so already. But while technologically preempting the worst of climate change may **temporarily** avert some of those losses, such a resolution of the climate quandary will not put an end to—will **barely address**—the ongoing destruction of life on Earth.

Eco-apocalypse –

Morgan -- warming threatens "extinction by fire" -- "changes are sudden and catastrophic" -- this hyperbolic rhetoric desensitizes populations and disables action

Also says problem is humans "appetite for energy"

#### We control uniqueness – apocalyptic warming rhetoric disabling effective approaches to warming now

Barrett & Gilles 12 -- \*nonprofit director and consultant for over a decade, her writing has appeared in newspapers, magazines, and blogs nationwide AND \*\*consulted for numerous political campaigns, advocacy organizations, and global NGOs, and has been profiled in the Washington Post, the Wall Street Journal, the Boston Globe, and Fast Company (Mel and Metthew Barrett, 4/23/12, "How Apocalyptic Thinking Prevents Us from Taking Political Action," http://www.theatlantic.com/politics/archive/2012/04/how-apocalyptic-thinking-prevents-us-from-taking-political-action/255758/)

To understand why fewer people believe in climate change even as evidence mounts, we must look beyond the industry-funded movement to deny the reality and effects of climate change. Perhaps equally important -- if not quite equally culpable -- has been the extent to which both the proponents and opponents of human-made climate change have led us down a cul-de-sac of conversation by exploiting the apocalyptic metaphor to make their case. Whether by design or by accident, the initial warnings of environmentalists -- of oceans rising to engulf our most beloved metropolises, of amber waves of grain scorched into a desert landscape -- activated the apocalyptic impulse. The focus on disastrous repercussions for our behavior at some point in the future echoed the warnings of the Israelite priests to wayward Jews in Babylon or, later, to those who submitted too willingly to Alexander's process of Hellenization. It was a familiar story: change, and change radically, or face hell on earth. Perhaps there was no other way to sound the alarm about the devastating threat presented by global climate change, but that echo of apocalyptic warning was quickly seized upon by the naysayers to dismiss the evidence out of hand. We've heard this story before, the deniers insisted, and throughout history those who have declared the end of the world was near have always been proven wrong. As early as 1989, the industry front man Patrick Michaels, a climatologist and global warming skeptic, was warning in the op-ed pages of the Washington Post of this new brand of "apocalyptic environmentalism," which represented "the most popular new religion to come along since Marxism." That the solutions to global warming (a less carbon-intensive economy, a more localized trade system, a greater respect for nature's power) parallel so perfectly the dream of environmentalists, and that the causes of global warming (an unrestrained industrial capitalism reliant on the continued and accelerating consumption of fossil fuels) parallel the economic dream of conservatives, has simply exacerbated the fact that global warming has now become just another front in the culture wars. By seizing upon and mocking the apocalyptic imagery and rhetoric of those sounding the alarm, the industry front groups succeeded in framing the debate about global warming into a question about what one believes. Thus, entangled with the myth of apocalypse -- and its attendant hold on our own sense of belief and self-identity -- the debate about anthropogenic climate change has reached an impasse. You believe in the Rapture; I believe in global warming -- and so the conversation stops. But global climate change is not an apocalyptic event that will take place in the future; it is a human-caused trend that is occurring now. And as we expend more time either fearfully imagining or vehemently denying whether that trend will bring about a future apocalypse, scientists tell us that the trend is accelerating. Talking about climate change or peak oil through the rhetoric of apocalypse may make for good television and attention-grabbing editorials, but such apocalyptic framing hasn't mobilized the world into action. Most of us are familiar with the platitude "When the only tool you have is a hammer, everything looks like a nail." In a similar way, our over-reliance on the apocalyptic storyline stands between us and our ability to properly assess the problems before us. Some see the looming crises of global warming and resource and energy depletion and conclude that inaction will bring about the end of civilization: only through a radical shift toward clean energy and conservation, those on the Left argue, can we continue the way of life that we have known. Those on the Right dismiss the apocalyptic threats altogether, because the proposed solutions to peak oil, global warming, and overpopulation conflict with core conservative beliefs about deregulation and the free-market economy, or with a religious worldview that believes humanity is not powerful enough to alter something as large as our climate. Still others dismiss the catalog of doom and gloom as mere apocalypticism itself. Surely, we convince ourselves, all the dire warnings about the effects of global warming aren't that different from the world-ending expectations of the Rapturists? The result is that the energy we could expend addressing the problems before us is instead consumed by our efforts to either dismiss the threat of apocalypse or to prove it real. Ultimately, the question becomes not what to do about the threats before us but whether you believe in the threats before us. By allowing the challenges of the 21st century to be hijacked by the apocalyptic storyline, we find ourselves awaiting a moment of clarity when the problems we must confront will become apparent to all -- or when those challenges will magically disappear, like other failed prophecies about the end of the world. Yet the real challenges we must face are not future events that we imagine or dismiss through apocalyptic scenarios of collapse -- they are existing trends. The evidence suggests that much of what we fear in the future -- the collapse of the economy, the arrival of peak oil and global warming and resource wars -- has already begun. We can wait forever, while the world unravels before our very eyes, for an apocalypse that won't come. The apocalyptic storyline becomes a form of daydreaming escape: the threat of global warming becomes a fantasy to one day live off the grid, or buy a farm, or grow our own food; economic collapse becomes like a prison break from the drudgery of meaningless and increasingly underpaid work in a soul-crushing cubicle; peak oil promises the chance to finally form a community with the neighbors to whom you've never spoken. Yet despite the fantasia peddled by Hollywood and numerous writers, a world battered by natural disasters and global warming, facing declining natural resources and civic unrest, without adequate water or energy or food, with gross inequalities between the rich and the poor, is not a setting for a picaresque adventure, nor is it the ideal place to start living in accord with your dreams. The deeper we entangle the challenges of the 21st century with apocalyptic fantasy, the more likely we are to paralyze ourselves with inaction -- or with the wrong course of action. We react to the idea of the apocalypse -- rather than to the underlying issues activating the apocalyptic storyline to begin with -- by either denying its reality ("global warming isn't real") or by despairing at its inevitability ("why bother recycling when the whole world is burning up?"). We react to apocalyptic threats by either partying (assuaging our apocalyptic anxiety through increased consumerism, reasoning that if it all may be gone tomorrow, we might as well enjoy it today), praying (in hopes that divine intervention or mere time will allow us to avoid confronting the challenges before us), or preparing (packing "bugout" packs for a quick escape or stocking up on gold, guns, and canned food, as though the transformative moment we anticipate will be but a brief interlude, a bad winter storm that might trap us indoors for a few days or weeks but that will eventually melt away). None of these responses avert, nor even mitigate, the very threats that have elicited our apocalyptic anxiety in the first place. Buying an electric car doesn't solve the problem of a culture dependent on endless growth in a finite world; building a bunker to defend against the zombie hordes doesn't solve the growing inequities between the rich and poor; praying for deliverance from the trials of history doesn't change that we must live in the times in which we were born. Indeed, neither partying, nor preparing, nor praying achieves what should be the natural goal when we perceive a threat on the horizon: we should not seek to ignore it, or simply brace for it, but to avert it.

Securitizing scarcity –

Blees -- "we've seen warfare exacerbated by competition over water"

#### This scenario planning creates a self-fulfilling prophecy and reactionary militarization – turns the case and only the alt’ can solve

Guslits 11 Bayly Guslits Political Science Department University of Western Ontario “The War on Water: International Water Security” February 28, 2011http://centreforforeignpolicystudies.dal.ca/pdf/gradsymp11/Guslits.pdf

The world is facing a water crisis, but there is still much that can be done to address the problems causing the emergency. First, "securitization" of the water crisis can become a self-fulfilling prophecy if it is not approached from a holistic viewpoint that takes into consideration ecological, human and state water security needs. If academics and policymakers continue to debate over whether the "water wars" scenario will ever come true, states may take this as a cue to securitize and militarize their water resources, and this will certainly lead to political and even violent conflict. However, if instead policymakers and government leadership use a holistic and diplomatic approach to address ecological and human water needs sustainably, international water security can be achieved. Whether this approach is branded a "post-security" or "environmental security" paradigm, the ultimate goal lies in changing policy and practice to address the root causes of water scarcity, and thus ensure water availability for environmental and anthropogenic purposes.

Kirsch -- "warfare over access to vital resources will become a global phenomenon"

#### Resource wars are all hype and your discourse causes them and environmental degradation

Kumari 12 -- International Relations Masters graduate @ University of Nottingham (Parmila, 1/29/12, "Securitising The Environment: A Barrier To Combating Environment Degradation Or A Solution In Itself?" <http://www.e-ir.info/2012/01/29/securitising-the-environment-a-barrier-to-combating-environment-degradation-or-a-solution-in-itself/>)

Secondly, the assertion that environmental degradation is a primary reason of conflict is purely speculative (Barnett 2003:10). Barnett suggests that the ‘evidence’ provided in support is a collection of historical events chosen to support the conflict-scarcity storyline and reify the realist assumption that eventually humans will resort to violence (Barnett 2001:66). This is as opposed to acknowledging that humans are equally capable of adapting. Thirdly, research shows that it is abundance of resources which drives competition, not scarcity (Barnet 2003:11). This makes sense because any territorial conquest to obtain resources will be expensive. A poor country suffering from resource scarcity would not be able to afford an offensive war(Deudney 1990: 309-11). The second and third points mean that environmental-conflict literature counteracts any attempts at solving the problem of environmental degradation. The discourse attributes high intentionality to people-because of scarcity they decide to become violent. This ignores the fact that human actions are not intended to harm the environment. The high intentionality given to people prevents them from being seen as victims who need help. Instead they are pictured as threats to state security. This view can exacerbate ethnic tensions as the state uses minority groups as scapegoats for environmental degradation. It also means that only those involved in conflict are relevant to environmental security, not those who are vulnerable (Detraz and Betsill 2009:307-15). In this way the South is scripted as “primeval Other” (Barnett 2001:65), where order can only be maintained by the intervention of the North, rather than by the provision of aid. The North’s agency in creating the environmental problems is completely erased. Instead environmental degradation is seen from the perspective of the individual state, questioning how it could affect the state, i.e. increased migration (Allenby 2000:18) and this leads to the adoption of narrow policies. Saad has said that securitising the environment in this way allows the North to justify intervening and forcing developing nations to follow policies which encapsulate the North’s norms (Saad 1991:325-7). In this way the powerful become stronger, and the weak weaker. This view may affect the South’s relations with the North. For example, Detraz and Betsill have commented on tensions between the North and South in the 2007 United Nations Security Council debate on climate change. Only 29% of the Southern states compared to 70% of Northern speakers supported the idea of the Security Council being a place to develop a global response to climate change. The reasons for this difference was that shifting decision-making to the Security Council would make Southern states unable to promote efficiently their interests in obtaining resources for climate adaptation and mitigation plans. Furthermore, Egypt and India argued that in suggesting this Northern countries were avoiding their responsibilities for controlling greenhouse gases, by trying to “shift attention to the need to address potential climate-related conflict in the South” (Detraz and Betsill 2009:312). In this way environmental security becomes a barrier because the traditional (realist) concept of security is used to immobilise any action towards dealing with the root causes of environmental degradation.

Competitiveness myth –

Kirsch -- "the nuclear industry is in far safer hands if the US leads" -- we should get benefits while others shouldn't

Barton -- "if the United States cannot meet the Asian energy cost challenge, their economies will encounter a significant decline" -- obvi causes backlash to heg

Baru -- "victory goes to the side with the more productive base" -- so why would we allow others to gain on us by giving them the best tech

#### Attempting to protect our economy from disaster is a liberal order-building method of security

Mark Neocleous, Professor of Critique of Political Economy, Brunel University, 08 (“Critique of Security”, McGill-Queen’s University, pp. 94-97, Published 2008)

But 'social security' was clearly an inadequate term for this, associated as it now was with 'soft' domestic policy issues such as old-age insurance. 'Collective security' would not do, associated as it was with the dull internationalism of Wilson on the one hand and still very much connected to the institutions of social security on the other." Only one term would do: national security. This not to imply that 'national security' was simply adopted and adapted from 'social security'. Rather, what we are dealing with here is another ideological circuit, this time between 'national security' and 'social security', in which the policies 'insuring' the security of the population are a means of securing the body politic, and vice versa;" a circuit in which, to paraphrase David Peace in the epigraph to this chapter, one can have one's teeth kicked out in the name of national security and put back in through social security. Social security and national security were woven together: the social and the national were the warp and the weft of the security fabric. The warp and the welt, that is, of a broader vision of economic security. Robert Pollard has suggested that 'the concept of "economic security'- the idea that American interests would be best sewed by an open and integrated economic system, as opposed to a large peacetime military establishment - was firmly established during the wartime period'. 71 In fact, the concept of 'economic security' became a concept of international politics in this period, but the concept itself had a longer history as the underlying idea behind social security in the 1930s, as we have seen. Economic security, in this sense, provides the important link between social and national security, becoming liberalism's strategic weapon of choice and the main policy instrument from 1945. As one State Department memo of February 1944 put it, 'the development of sound international economic relations is closely related to the problem of security. But it would also continue to be used to think about the political administration of internal order. Hence Roosevelt's comment that 'we must plan for, and help to bring about, an expanded economy which will result in more security [and so that the conditions of 1932 and the beginning of 1933 won't come back again'.' On security grounds, inside and outside were constantly folding into one another, the domestic and the foreign never quite On the fabrication of economic order properly distinguishable. The reason why lay in the kind of economic order to be secured: both domestically and internationally, 'economic security' is coda for capitalist order. Giving a lecture at Harvard University on 5 June 1947, Secretary of State George C. Marshall recalled the disruption to the European economy during the war and Europe's continuing inability to feed itself, and suggested that if the US did not help there would be serious economic, social and political deterioration which would in turn have a knock-on effect on US capital. The outcome was a joint plan submitted to the US from European states at the end of August, after much wrangling with the Soviet Union, requesting $28 billion over a four-year period (the figure was reduced when finally agreed by Congress). The European Recovery Program (ERE known as the Marshall Plan) which emerged has gone down as an economic panacea, 'saving' Europe from economic disaster. But as the first of many such 'Plans', all the way down to the recent 'reconstruction' of Iraq, it does not take much to read the original Marshall Plan through the lens of security and liberal order-building. Alan Milward has suggested that the conventional reading of the Marshall Plan and US aid tends to accept the picture of post-war Europe on the verge of collapse and with serious social and economic discontent, such that it needed to be rescued by US aid. In fact, excluding Germany, no country was actually on the verge of collapse. There were no bank crashes, very few bankruptcies and the evidence of a slow down in industrial production is unconvincing. There is also little evidence of grave distress or a general deterioration in the standard of living. By late-1946 production had roughly equalled pre-war levels in all countries except Germany. And yet Marshall Aid came about. Milward argues that the Marshall Plan was designed not to increase the rate of recovery in European countries or to prevent European economies from deteriorating, but to sustain ambitious, new, expansionary economic and social policies in Western European countries which were in fact already in full-bloom conditions. In other words, the Marshall Plan was predominantly designed for political objectives - hence conceived and rushed through by the Department of State itself." Milward's figures are compelling, and complicate the conventional picture of the Marshall Plan as simply a form of economic aid. But to distinguish reasons that are 'economic' reasons from reasons that are 'political' misses the extent to which, in terms of security, the economic and the political are entwined. This is why the Marshall Plan is so inextricably linked to the Truman Doctrine's offer of military aid and intervention beyond us borders, a new global commitment at the heart of which was the possibility of intervention in the affairs of other countries. As Joyce and Gabriel Kolko have argued the important dimension of the Truman Doctrine is revealed in the various drafts of Truman's speech before it was finally delivered on 12 March, and the private memos of the period. Members of the cabinet and other top officials understood very clearly that the united States was now defining a strategy and budget appropriate to its new global commitments, and that a far greater involvement in other countries was now pending especially on the economic level. Hence the plethora of references to 'a world-wide trend away from the system of free enterprise's which the state Department's speech-writers thought a 'grave threat' to American interests. Truman's actual speech to Congress is therefore more interesting for what it implied than what it stated explicitly. And what it implied was the politics behind the Marshall Plan: economic security as a means of maintaining political order against the threat of communism. The point then, is not just that the Marshall Plan was 'political' how could any attempt to reshape global capital be anything but political? It is fairly clear that the Marshall Plan was multidimensional, and to distinguish reasons that are 'economic' reasons from reasons that are 'political' misses the extent to which the economic, political and military are entwined The point is that it was very much a project driven by the ideology of security. The referent object of 'security here is 'economic order'. The government and the emerging national security bureaucracy saw the communist threat as economic rather than military. As Latham notes, at first glance the idea of military security within a broad context of economic containment merely appears to be one more dimension of strength within the liberal order. But in another respect the project of economic security might itself be viewed as the very force that made military security appear to be necessary. In this sense, the priority given to economic security was the driving force behind the us commitment to underwrite milita ry security for Western Europe." The protection and expansion of capital came to be seen as the path to security, and vice versa. This created the grounds for a re-ordering of global capital involving a constellation of class and corporate forces as well as state power, undertaken in the guise of national security. NSC-68, the most significant national security document to emerge in this period, stated that the 'overall policy at the present time may be described as one designed to foster a world environment in which the American system can survive and flourish'." In this sense we can also read the International Monetary Fund (IMF) and General Agreement on Tariffs and Trade (GATT) of 1947, the Brussels Pact of March 1948 and the nascent movement towards 'European Union' as part and parcel of the security project being mapped out." The key institutions of 'international order' in this period invoked a particular vision of order with a view to reshaping global capital as a means of bringing 'security' political, social and economic - from the communist threat.

#### Militaristic dominance –

Brezinski -- hegemonic decline only problematic because "A waning United States would likely be more nationalistic" -- you are that nationalism and we solve it

#### Prefer our disjunctive scenarios to their short-term conjunctive scenarios.

Eliezer **Yudkowsky**, 8/31/**2006**. Singularity Institute for Artificial Intelligence Palo Alto, CA. “Cognitive biases potentially affecting judgment of global risks,” Forthcoming in Global Catastrophic Risks, eds. Nick Bostrom and Milan Cirkovic, singinst.org/upload/cognitive-biases.pdf.

The conjunction fallacy similarly applies to futurological forecasts. Two independent sets of professional analysts at the Second International Congress on Forecasting were asked to rate, respectively, the probability of "A complete suspension of diplomatic relations between the USA and the Soviet Union, sometime in 1983" or "A Russian invasion of Poland, and a complete suspension of diplomatic relations between the USA and the Soviet Union, sometime in 1983". The second set of analysts responded with significantly higher probabilities. (Tversky and Kahneman 1983.) In Johnson et. al. (1993), MBA students at Wharton were scheduled to travel to Bangkok as part of their degree program. Several groups of students were asked how much they - 6 - were willing to pay for terrorism insurance. One group of subjects was asked how much they were willing to pay for terrorism insurance covering the flight from Thailand to the US. A second group of subjects was asked how much they were willing to pay for terrorism insurance covering the round-trip flight. A third group was asked how much they were willing to pay for terrorism insurance that covered the complete trip to Thailand. These three groups responded with average willingness to pay of $17.19, $13.90, and $7.44 respectively. According to probability theory, **adding additional detail onto a story must render the story less probable**. It is less probable that Linda is a feminist bank teller than that she is a bank teller, since all feminist bank tellers are necessarily bank tellers. Yet human psychology seems to follow the rule that adding an additional detail can make the story more plausible. People might pay more for international diplomacy intended to prevent nanotechnological warfare by China, than for an engineering project to defend against nanotechnological attack from any source. The second threat scenario is less vivid and alarming, but the defense is more useful because it is more vague. More valuable still would be strategies which make humanity harder to extinguish without being specific to nanotechnologic threats - such as colonizing space, or see Yudkowsky (this volume) on AI. Security expert Bruce Schneier observed (both before and after the 2005 hurricane in New Orleans) that the U.S. government was guarding specific domestic targets against "movie-plot scenarios" of terrorism, at the cost of taking away resources from emergency-response capabilities that could respond to any disaster. (Schneier 2005.) Overly detailed reassurances can also create false perceptions of safety: "X is not an existential risk and you don't need to worry about it, because A, B, C, D, and E"; where the failure of any one of propositions A, B, C, D, or E potentially extinguishes the human species. "We don't need to worry about nanotechnologic war, because a UN commission will initially develop the technology and prevent its proliferation until such time as an active shield is developed, capable of defending against all accidental and malicious outbreaks that contemporary nanotechnology is capable of producing, and this condition will persist indefinitely." **Vivid, specific scenarios can inflate our probability estimates of security**, as well as misdirecting defensive investments into needlessly narrow or implausibly detailed risk scenarios. More generally, people tend to overestimate conjunctive probabilities and underestimate disjunctive probabilities. (Tversky and Kahneman 1974.) That is, **people tend to overestimate the probability that**, e.g., **seven events of 90% probability will all occur**. Conversely, **people tend to underestimate the probability that at least one of seven events of 10% probability will occur**. Someone judging whether to, e.g., incorporate a new startup, must evaluate the probability that many individual events will all go right (there will be sufficient funding, competent employees, customers will want the product) while also considering the likelihood that at least one critical failure will occur (the bank refuses - 7 - a loan, the biggest project fails, the lead scientist dies). This may help explain why only 44% of entrepreneurial ventures3 survive after 4 years. (Knaup 2005.) Dawes (1988) observes: 'In their summations lawyers avoid arguing from disjunctions ("either this or that or the other could have occurred, all of which would lead to the same conclusion") in favor of conjunctions. Rationally, of course, disjunctions are much more probable than are conjunctions.' The scenario of humanity going extinct in the next century is a disjunctive event. It could happen as a result of any of the existential risks discussed in this book - or some other cause which none of us foresaw. Yet for a futurist, disjunctions make for an awkward and unpoetic-sounding prophecy.

#### Pursuit of hegemony is a fantasy of control that relies upon construction of threatening Otherness --- this prompts resistance and create a permanent state of conflict

**Chernus 6** (Ira, Professor of Religious Studies and Co-director of the Peace and Conflict Studies Program – University of Colorado-Boulder, Monsters to Destroy: The Neoconservative War on Terror and Sin, p. 53-54)

The end of the cold war spawned a tempting fantasy of imperial omnipotence on a global scale. The neocons want to turn that fantasy into reality. But reality will not conform to the fantasy; it won’t stand still or keep any semblance of permanent order. So the neocons’ efforts inevitably backfire. Political scientist Benjamin Barber explains that a nation with unprecedented power has “unprecedented vulnerability: for it must repeatedly extend the compass of its power to preserve what it already has, and so is almost by definition always overextended.” Gary Dorrien sees insecurity coming at the neoconservatives in another way, too: “For the empire, every conflict is a local concern that threatens its control. However secure it maybe, it never feels secure enough. The [neocon] unipolarists had an advanced case of this anxiety. . . . Just below the surface of the customary claim to toughness lurked persistent anxiety. This anxiety was inherent in the problem of empire and, in the case of the neocons, heightened by ideological ardor.”39 If the U.S. must control every event everywhere, as neocons assume, every act of resistance looks like a threat to the very existence of the nation. There is no good way to distinguish between nations or forces that genuinely oppose U.S. interests and those that don’t. Indeed, change of any kind, in any nation, becomes a potential threat. Everyone begins to look like a threatening monster that might have to be destroyed. It’s no surprise that a nation imagined as an implacable enemy often turns into a real enemy. When the U.S. intervenes to prevent change, it is likely to provoke resistance. Faced with an aggressive U.S. stance, any nation might get tough in return. Of course, the U.S. can say that it is selflessly trying to serve the world. But why would other nations believe that? It is more likely that others will resist, making hegemony harder to achieve. To the neocons, though, resistance only proves that the enemy really is a threat that must be destroyed. So the likelihood of conflict grows, making everyone less secure. Moreover, the neocons want to do it all in the public spotlight. In the past, any nation that set out to conquer others usually kept its plans largely secret. Indeed, the cold war neocons regularly blasted the Soviets for harboring a “secret plan” for world conquest. Now here they are calling on the U.S. to blare out its own domineering intentions for all the world to [end page 53] hear. That hardly seems well calculated to achieve the goal of hegemony. But it is calculated to foster the assertive, even swaggering, mood on the home front that the neocons long for. Journalist Ron Suskind has noted that neocons always offer “a statement of enveloping peril and no hypothesis for any real solution.” They have no hope of finding a real solution because they have no reason to look for one. Their story allows for success only as a fantasy. In reality, they expect to find nothing but an endless battle against an enemy that can never be defeated. At least two prominent neocons have said it quite bluntly. Kenneth Adelman: “We should not try to convince people that things are getting better.” Michael Ledeen: “The struggle against evil is going to go on forever.”40 This vision of endless conflict is not a conclusion drawn from observing reality. It is both the premise and the goal of the neocons’ fantasy. Ultimately, it seems, endless resistance is what they really want. Their call for a unipolar world ensures a **permanent state of conflict**, so that the U.S. can go on forever proving its military supremacy and promoting the “manly virtues” of militarism. They have to admit that the U.S., with its vastly incomparable power, already has unprecedented security against any foreign army. So they must sound the alarm about a shadowy new kind of enemy, one that can attack in novel, unexpected ways. They must make distant changes appear as huge imminent threats to America, make the implausible seem plausible, and thus find new monsters to destroy. The neocons’ story does not allow for a final triumph of order because it is not really about creating a politically calm, orderly world. It is about creating a society full of virtuous people who are willing and able to fight off the threatening forces of social chaos. Having superior power is less important than proving superior power. That always requires an enemy. Just as neocons need monsters abroad, they need a frightened society at home. Only insecurity can justify their shrill call for a stronger nation (and a higher military budget). The more dire their warnings of insecurity, the more they can demand greater military strength and moral resolve. Every foreign enemy is, above all, another occasion to prod the American people to overcome their anxiety, identify evil, fight resolutely against it, and stand strong in defense of their highest values. Hegemony will do no good unless there is challenge to be met, weakness to be conquered, evil to be overcome. The American people must actively seek hegemony and make sacrifices for it, to show that they are striving to overcome their own weakness. So the quest for strength still demands a public confession of weakness, just as the neocons had demanded two decades earlier when they warned of a Soviet nuclear attack through a “window of vulnerability.” The quest for strength through the structures of national security still demands a public declaration of national insecurity. Otherwise, there is nothing to overcome. The more frightened the public, the more likely it is to believe and enact the neocon story.

#### Conflict de-escalation is backwards – assumptions of violence become a self-fulfilling prophecy and guarantee environmental collapse

Clark 4 (Mary E., French Cumbie Professor of Conflict Resolution at George Mason University, “Rhetoric, Patriarchy & War: Explaining the Dangers of "Leadership" in Mass Culture,” Women and Language. Urbana: Fall,. Vol. 27, Iss. 2, ProQuest)

Today's Western patriarchal world view now dominates globalwide dialogue among the "leaders" of Earth's nearly two hundred nation-states. Its Machiavellian/Realpolitik assumptions about the necessity of' military power to preserve order within and between groups of humans trumps--and stifles--other potential viewpoints. Founded on the belief that "evil" is innate, it dictates that human conflict must be "controlled": global "law" backed by coercive force. This view, when cross-culturally imposed, becomes a self-fulfilling prophecy, thus "legitimating" an escalating use of force. Western leaders (male and female) use a rhetoric couched in a "hegemonic masculinity" to justify their ready use of military force to coerce "those who are against us" into compliance. This translates globally as "national leaders must never lose face!" Changing this dominant paradigm requires dismantling the hierarchic hegemony of masculine militarism and its related economic institutions, through global cross-cultural dialogues, thus replacing a hegemonic world view and institutions with new, more adaptive visions, woven out of the most useful remnants of multiple past cultural stories. The paper concludes with a few examples where people around the worm are doing just this--using their own small voices to insert their local "sacred social story" into the global dialogue. This global process--free from a hegemonic militaristic rhetoric--has the potential to initiate a planetary dialogue where "boundaries" are no longer borders to be defended, but sites of social ferment and creative adaptation. When the call came for papers on War, Language, and Gender, referring us to Carol Cohn's seminal paper "Sex and Death in the Rational World of Defense Intellectuals," (1) I at first felt that little more could be added on the subject. But events in Washington in the ensuing weeks stimulated me to a broader "take" on this topic. Defense intellectuals, after all, are embedded in a whole culture, and the interaction is two-way. Not only does their strategic framework with its euphemistic language about war and killing have the outcome of forcing society to think in their terms; their framework and language developed in response to our deeply embedded, Western cultural image of a Machiavellian / neo-Darwinian universe. In other words, militarism and the necessity for organized physical force (2) emerge out of culturewide assumptions about human nature. Throughout historical times these assumptions have repeatedly proved to be self-fulfilling prophecies. The pervasive perception of enemy-competitors has generated violent conflicts that flared up and died back, only to flare up again through our failure to achieve deep resolution and, especially, to alter our basic beliefs about human nature and our consequent social institutions. Today our species, politically, comprises some 180190 "nations" of varying cultural homogeneity and moral legitimacy, not to mention size and physical power. Regardless of their indigenous, internal cultural preferences, their cross-national interactions are institutionalized to fit a framework long established by former Western colonial powers among themselves. In other words, the global "reality" constructed by Western patriarchies-a Realpolitik, ultimately grounded in military power-has come to define day-to-day cross-national politics. During the era of the Cold War, this resulted in small, powerless nations seeking alliances with one or other superpower, which offered not only development aid but military protection, and, for locally unpopular, but "cooperating" leaders, small arms to maintain order at home. The "end" of the Cold War brought little change in this pervasive global militarism (though it did strengthen the role of economic hegemony by the remaining superpower (3)). The enormous technological "improvements"-i.e. efficiency in killing power-in weaponry of all types over the past few decades has now resulted in a dangerously over-armed planet that simultaneously faces a desperate shortage of resources available for providing the world's people with water, energy, health care, education, and the infrastructure for distributing them. While our environmental and social overheads continue to mount, our species seems immobilized, trapped in an institutionalized militarism-an evolutionary cul-de-sac! We need new insights-as Cohn said, a new language, a new set of metaphors, a new mental framework-for thinking, dialoguing and visioning new patterns of intersocietal interaction.

#### Culminates in planetary annihilation

**Dallymayr 4** (Fred, Professor of Philosophy and Political Science – University of Notre Dame, “The Underside of Modernity: Adorno, Heidegger, and Dussel”, Constellations, 11(1))

What Dussel here calls asymmetry is otherwise often called hegemony – or else the onset of a new global imperialism (involving the rule of the “West” over the “Rest”). In such a situation, nothing can be more important and salutary than the cultivation of global critical awareness, of critical counter-discourses willing and able to call into question the presumptions of global imperial rule. The dangers of such totalizing domination are becoming more evident every day. With the growing technological sophistication of weaponry we are relentlessly instructed about the underside of modernity, about the fateful collusion of power and knowledge in the unfolding of modern enlightenment (as analyzed by Adorno and Horkheimer). Coupled with the globalizing momentum, military sophistication greatly enhances the prospect of global warfare – indeed of **global “total” warfare** (as envisaged by Heidegger in the 1930s). Such warfare, moreover, is profiled against the backdrop of hegemonic asymmetry (as seen by Dussel): the vastly unequal possession of nuclear and other weapons of mass destruction. In this situation, the goal of global warfare is bound to be the **“total” subjugation of** less developed or **subaltern societies** – a subjugation accomplished through longdistance military offensives capable of inflicting maximum casualties on enemies while minimizing the attackers’ costs.25 Given the intoxicating effects of global rule, must one not also anticipate corresponding levels of total depravity and corruption among the rulers? In fact, must one not fear the upsurge of a new breed of “global master criminals” (planetarische Hauptverbrecher) whose actions are likely to match those of their twentieth-century predecessors, and perhaps even surpass them (behind a new shield of immunity)? Armed with unparalleled nuclear devices and unheard-of strategic doctrines, global masters today cannot only control and subjugate populations, but in fact destroy and incinerate them (from high above). In the words of Arundhati Roy, addressed to the world’s imperial rulers:To slow a beast, you break its limbs. To slow a nation, you break its people; you rob them of volition. You demonstrate your absolute command over their destiny. You make it clear that ultimately it falls to you to decide who lives, who dies, who prospers, who doesn’t. To exhibit your capability you show off all that you can do, and how easily you can do it – how easily you could **press a button and annihilate the earth**.26

### AT No Alt' Solvency (Wendt)

#### Why they think it's ok to read cards about realism and a card by Alex Wendt is beyond me -- Wendt is one of the foremost constructivist thinkers and definitely provides his theory in contrast to realism

#### "If practices are stable, they constitute a system that may resist change" -- you engage in the same epistemology about warming and military dominance but nothing changes

#### "Social system confronts its members as an objective social fact" -- like their ideological commitment to hegemony, that means its constructed

#### "The challenge is to create dissonance as perceptions of threat causes resistance" -- shouldn't even need to specifically apply that to the aff, the alt' is that disonance

### 2NC Alt Solvency

#### The alternative reject's the affirmative's security discourse – think of the alternative as a broader process rather thean a finished product – only way to eschew security logic is to stop the reiteration of threats that marginalize political decision-making – fighting for an alternative political language requires tolerating uncertainty -- tha's Neoclous

#### Even if there are obstacles to the alt’, our thought excercise is more productive than their stable production of the present – the alternative enables a different conception of security that can overcome inevitable conflict Burke 7 (Anthony, Senior Lecturer – School of Politics and Professor of International Relations – University of New South Wales, Beyond Security, Ethics and Violence, p. 68-69)

This chapter is thus an exercise in thinking, which challenges the continuing power of political ontologies (forms of truth and being) that connect security, sovereignty, belonging, otherness and violence in ways that for many **appear like enduring political facts**, inevitable and irrefutable. Conflict, violence and alienation then arise not merely from individual or collective acts whose conditions might be understood and policed; they **condition politics** as such, forming a permanent ground, a dark substrata underpinning the very **possibility of the present**. Conflict and alienation seem inevitable because of the way in which the modem political imagination **has conceived and thought security**, sovereignty and ethics. Israel/ Palestine is chosen here as a particularly urgent and complex example of this problem, but it is a problem with much wider significance. While I hold out the hope that security can be re-visioned away from a permanent dependence on insecurity, exclusion and violence, and I believe it retains normative promise, this analysis takes a deliberate step backward to examine the very real barriers faced by such a project. Security cannot properly be rethought without a deeper understanding of, and challenge to, the political forms and structures it claims to enable and protect. If Ken Booth argues that the state should be a means rather than an end of security, my objective here is to place the continuing power and depth of its status as an end of security, and a fundamental source for political identity, under critical interrogation.' If the state is to become a means of security (one among many) it will have to be fundamentally transformed. The chapter pursues this inquiry in two stages. The first outlines the historic strength and effective redundancy of such an exciusivist vision of security in Israel, wherein Israel not only confronts military and political antagonists with an 'iron wall' of armed force but maps this onto a profound clash of existential narratives, a problem with resonances in the West's confrontation with radical Islamism in the war on terror. The second, taking up the remainder of the chapter, then explores a series of potential resources in continental philosophy and political theory that might help us to think our way out of a security grounded in violence and alienation. Through a critical engagement with this thought, I aim to construct a political ethics based not in relations between insecure and separated identities mapped solely onto nation-states, but in relations of responsibility and interconnection that can negotiate and recognise both distinct and intertwined histories, identities and needs; an ethics that might underpin a vision of interdependent (national and non-national) existence proper to an integrated world traversed by endless flows of people, commerce, ideas, violence and future potential.

#### Critical intellectualism creates change – answers all of their “alt fails” args

**Jones 99** (Richard Wyn, Professor of International Relations – Aberystwyth University, Security, Strategy, and Critical Theory, p. 155-163)

The central political task of the intellectuals is to aid in the construction of a counterhegemony and thus undermine the prevailing patterns of discourse and interaction that make up the currently dominant hegemony. This task is accomplished through educational activity, because, as Gramsci argues, “every relationship of ‘hegemony’ is necessarily a pedagogic relationship” (Gramsci 1971: 350). Discussing the relationship of the “philosophy of praxis” to political practice, Gramsci claims: It [the theory] does not tend to leave the “simple” in their primitive philosophy of common sense, but rather to lead them to a higher conception of life. If it affirms the need for contact between intellectuals and “simple” it is not in order to restrict scientific activity and preserve unity at the low level of the masses, but precisely in order to construct an intellectual-moral bloc which can make politically possible the intellectual progress of the mass and not only of small intellectual groups. (Gramsci 1971: 332-333). According to Gramsci, this attempt to construct an alternative “intellectual-moral bloc” should take place under the auspices of the Communist Party – a body he described as the “modern prince.” Just as Niccolo Machiavelli hoped to see a prince unite Italy, rid the country of foreign barbarians, and create a virtu-ous state, Gramsci believed that the modern price could lead the working class on its journey toward its revolutionary destiny of an emancipated society (Gramsci 1971: 125-205). Gramsci’s relative optimism about the possibility of progressive theorists playing a constructive role in emancipatory political practice was predicated on his belief in the existence of a universal class (a class whose emancipation would inevitably presage the emancipation of humanity itself) with revolutionary potential. It was a gradual loss of faith in this axiom that led Horkheimer and Adorno to their extremely pessimistic prognosis about the possibilities of progressive social change. But does a loss of faith in the revolutionary vocation of the proletariat necessarily lead to the kind of quietism ultimately embraced by the first generation of the Frankfurt School? The conflict that erupted in the 1960s between them and their more radical students suggests not. Indeed, contemporary critical theorists claim that the deprivileging of the role of the proletariat in the struggle for emancipation is actually a positive move. Class remains a very important axis of domination in society, but it is not the only such axis (Fraser 1995). Nor is it valid to reduce all other forms of domination – for example, in the case of gender – to class relations, as orthodox Marxists tend to do. To recognize these points is not only a first step toward the development of an analysis of forms of exploitation and exclusion within society that is more attuned to social reality; it is also a realization that there are other forms of emancipatory politics than those associated with class conflict.1 This in turn suggests new possibilities and problems for emancipatory theory. Furthermore, the abandonment of faith in revolutionary parties is also a positive development. The history of the European left during the twentieth century provides myriad examples of the ways in which the fetishization of party organizations has led to bureaucratic immobility and the confusion of means with ends (see, for example, Salvadori 1990). The failure of the Bolshevik experiment illustrates how disciplined, vanguard parties are an ideal vehicle for totalitarian domination (Serge 1984). Faith in the “infallible party” has obviously been the source of strength and comfort to many in this period and, as the experience of the southern Wales coalfield demonstrates, has inspired brave and progressive behavior (see, for example, the account of support for the Spanish Republic in Francis 1984). But such parties have so often been the enemies of emancipation that they should be treated with the utmost caution. Parties are necessary, but their fetishization is potentially disastrous. History furnishes examples of progressive developments that have been positively influenced by organic intellectuals operating outside the bounds of a particular party structure (G. Williams 1984). Some of these developments have occurred in the particularly intractable realm of security. These examples may be considered as “resources of hope” for critical security studies (R. Williams 1989). They illustrate that ideas are important or, more correctly, that change is the product of the dialectical interaction of ideas and material reality. One clear security-related example of the role of critical thinking and critical thinkers in aiding and abetting progressive social change is the experience of the peace movement of the 1980s. At that time the ideas of dissident defense intellectuals (the “alternative defense” school) encouraged and drew strength from peace activism. Together they had an effect not only on short-term policy but on the dominant discourses of strategy and security, a far more important result in the long run. The synergy between critical security intellectuals and critical social movements and the potential influence of both working in tandem can be witnessed particularly clearly in the fate of common security. As Thomas Risse-Kappen points out, the term “common security” originated in the contribution of peace researchers to the German security debate of the 1970s (Risse-Kappen 1994: 186ff.); it was subsequently popularized by the Palme Commission report (Independent Commission on Disarmament and Security Issues 1982). Initially, mainstream defense intellectuals dismissed the concept as hopelessly idealistic; it certainly had no place in their allegedly hardheaded and realist view of the world. However, notions of common security were taken up by a number of different intellectuals communities, including the liberal arms control community in the United States, Western European peace researchers, security specialists in the center-left political parties of Western Europe, and Soviet “institutchiks” – members of the influential policy institutes in the Soviet Union such as the United States of America and Canada Institute (Landau 1996: 52-54; Risse-Kappen 1994: 196-200; Kaldor 1995; Spencer 1995). These communities were subsequently able to take advantage of public pressure exerted through social movements in order to gain broader acceptance for common security. In Germany, for example, “in response to social movement pressure, German social organizations such as churches and trade unions quickly supported the ideas promoted by peace researchers and the SPD” (Risse-Kappen 1994: 207). Similar pressures even had an effect on the Reagan administration. As Risse-Kappen notes: When the Reagan administration brought hard-liners into power, the US arms control community was removed from policy influence. It was the American peace movement and what became known as the “freeze campaign” that revived the arms control process together with pressure from the European allies. (Risse-Kappen 1994: 205; also Cortright 1993: 90-110). Although it would be difficult to sustain a claim that the combination of critical movements and intellectuals persuaded the Reagan government to adopt the rhetoric and substance of common security in its entirety, it is clear that it did at least have a substantial impact on ameliorating U.S. behavior. The most dramatic and certainly the most unexpected impact of alternative defense ideas was felt in the Soviet Union. Through various East-West links, which included arms control institutions, Pugwash conferences, interparty contacts, and even direct personal links, a coterie of Soviet policy analysts and advisers were drawn toward common security and such attendant notions as “nonoffensive defense” (these links are detailed in Evangelista 1995; Kaldor 1995; Checkel 1993; Risse-Kappen 1994; Landau 1996 and Spencer 1995 concentrate on the role of the Pugwash conferences). This group, including Palme Commission member Georgii Arbatov, Pugwash attendee Andrei Kokoshin , and Sergei Karaganov, a senior adviser who was in regular contact with the Western peace researchers Anders Boserup and Lutz Unterseher (Risse-Kappen 1994: 203), then influenced Soviet leader Mikhail Gorbachev. Gorbachev’s subsequent championing of common security may be attributed to several factors. It is clear, for example, that new Soviet leadership had a strong interest in alleviating tensions in East-West relations in order to facilitate much-needed domestic reforms (“the interaction of ideas and material reality”). But what is significant is that the Soviets’ commitment to common security led to significant changes in force sizes and postures. These in turn aided in the winding down of the Cold War, the end of Soviet domination over Eastern Europe, and even the collapse of Russian control over much of the territory of the former Soviet Union. At the present time, in marked contrast to the situation in the early 1980s, common security is part of the common sense of security discourse. As MccGwire points out, the North Atlantic Treaty Organization (NATO) (a common defense pact) is using the rhetoric of common security in order to justify its expansion into Eastern Europe (MccGwire 1997). This points to an interesting and potentially important aspect of the impact of ideas on politics. As concepts such as common security, and collective security before it (Claude 1984: 223-260), are adopted by governments and military services, they inevitably become somewhat debased. The hope is that enough of the residual meaning can survive to shift the parameters of the debate in a potentially progressive direction. Moreover, the adoption of the concept of common security by official circles provides critics with a useful tool for (immanently) critiquing aspects of security policy (as MccGwire 1997 demonsrates in relation to NATO expansion). The example of common security is highly instructive. First, it indicates that critical intellectuals can be politically engaged and play a role – a significant one at that – in making the world a better and safer place. Second, it points to potential future addressees for critical international theory in general, and critical security studies in particular. Third, it also underlines the role of ideas in the evolution in society. CRITICAL SECURITY STUDIES AND THE THEORY-PRACTICE NEXUS Although most proponents of critical security studies reject aspects of Gramsci’s theory of organic intellectuals, in particular his exclusive concentration on class and his emphasis on the guiding role of the party, the desire for engagement and relevance must remain at the heart of their project. The example of the peace movement suggests that critical theorists can still play the role of organic intellectuals and that this organic relationship need not confine itself to a single class; it can involve alignment with different coalitions of social movements that campaign on an issue or a series of issues pertinent to the struggle for emancipation (Shaw 1994b; R. Walker 1994). Edward Said captures this broader orientation when he suggests that critical intellectuals “are always tied to and ought to remain an organic part of an ongoing experience in society: of the poor, the disadvantaged, the voiceless, the unrepresented, the powerless” (Said 1994: 84). In the specific case of critical security studies, this means placing the experience of those men and women and communities for whom the present world order is a cause of insecurity rather than security at the center of the agenda and making suffering humanity rather than raison d’etat the prism through which problems are viewed. Here the project stands full-square within the critical theory tradition. If “all theory is for someone and for some purpose,” then critical security studies is for “the voiceless, the unrepresented, the powerless,” and its purpose is their emancipation. The theoretical implications of this orientation have already been discussed in the previous chapters. They involve a fundamental reconceptualization of security with a shift in referent object and a broadening of the range of issues considered as a legitimate part of the discourse. They also involve a reconceptualization of strategy within this expanded notion of security. But the question remains at the conceptual level of how these alternative types of theorizing – even if they are self-consciously aligned to the practices of critical or new social movements, such as peace activism, the struggle for human rights, and the survival of minority cultures – can become “a force for the direction of action.” Again, Gramsci’s work is insightful. In the Prison Notebooks, Gramsci advances a sophisticated analysis of how dominant discourses play a vital role in upholding particular political and economic orders, or, in Gramsci’s terminology, “historic blocs” (Gramsci 1971: 323-377). Gramsci adopted Machiavelli’s view of power as a centaur, ahlf man, half beast: a mixture of consent and coercion. Consent is produced and reproduced by a ruling hegemony that holds sway through civil society and takes on the status of common sense; it becomes subconsciously accepted and even regarded as beyond question. Obviously, for Gramsci, there is nothing immutable about the values that permeate society; they can and do change. In the social realm, ideas and institutions that were once seen as natural and beyond question (i.e., commonsensical) in the West, such as feudalism and slavery, are now seen as anachronistic, unjust, and unacceptable. In Marx’s well-worn phrase, “All that is solid melts into the air.” Gramsci’s intention is to harness this potential for change and ensure that it moves in the direction of emancipation. To do this he suggests a strategy of a “war of position” (Gramsci 1971: 229-239). Gramsci argues that in states with developed civil societies, such as those in Western liberal democracies, any successful attempt at progressive social change requires a slow, incremental, even molecular, struggle to break down the prevailing hegemony and construct an alternative counterhegemony to take its place. Organic intellectuals have a crucial role to play in this process by helping to undermine the “natural,” “commonsense,” internalized nature of the status quo. This in turn helps create political space within which alternative conceptions of politics can be developed and new historic blocs created. I contend that Gramsci’s strategy of a war of position suggests an appropriate model for proponents of critical security studies to adopt in relating their theorizing to political practice. THE TASKS OF CRITICAL SECURITY STUDIES If the project of critical security studies is conceived in terms of war of position, then the main task of those intellectuals who align themselves with the enterprise is to attempt to undermine the prevailing hegemonic security discourse. This may be accomplished by utilizing specialist information and expertise to engage in an immanent critique of the prevailing security regimes, that is, comparing the justifications of those regimes with actual outcomes. When this is attempted in the security field, the prevailing structures and regimes are found to fail grievously on their own terms. Such an approach also involves challenging the pronouncements of those intellectuals, traditional or organic, whose views serve to legitimate, and hence reproduce, the prevailing world order. This challenge entails teasing out the often subconscious and certainly unexamined assumptions that underlie their arguments while drawing attention to the normative viewpoints that are smuggled into mainstream thinking about security behind its positivist façade. In this sense, proponents of critical security studies approximate to Foucault’s notion of “specific intellectuals” who use their expert knowledge to challenge the prevailing “regime of truth” (Foucault 1980: 132). However, critical theorists might wish to reformulate this sentiment along more familiar Quaker lines of “speaking truth to power” (this sentiment is also central to Said 1994) or even along the eisteddfod lines of speaking “truth against the world.” Of course, traditional strategists can, and indeed do, sometimes claim a similar role. Colin S. Gray, for example, states that “strategists must be prepared to ‘speak truth to power’” (Gray 1982a: 193). But the difference between Gray and proponents of critical security studies is that, whereas the former seeks to influence policymakers in particular directions without questioning the basis of their power, the latter aim at a thoroughgoing critique of all that traditional security studies has taken for granted. Furthermore, critical theorists base their critique on the presupposition, elegantly stated by Adorno, that “the need to lend suffering a voice is the precondition of all truth” (cited in Jameson 1990: 66). The aim of critical security studies in attempting to undermine the prevailing orthodoxy is ultimately educational. As Gramsci notes, “every relationship of ‘hegemony’ is necessarily a pedagogic relationship” (Gramsci 1971: 350; see also the discussion of critical pedagogy in Neufeld 1995: 116-121). Thus, by criticizing the hegemonic discourse and advancing alternative conceptions of security based on different understandings of human potentialities, the approach is simultaneously playing apart in eroding the legitimacy of the ruling historic bloc and contributing to the development of a counterhegemonic position. There are a number of avenues of avenues open to critical security specialists in pursuing this educational strategy. As teachers, they can try to foster and encourage skepticism toward accepted wisdom and open minds to other possibilities. They can also take advantage of the seemingly unquenchable thirst of the media for instant pundistry to forward alternative views onto a broader stage. Nancy Fraser argues: “As teachers, we try to foster an emergent pedagogical counterculture …. As critical public intellectuals we try to inject our perspectives into whatever cultural or political public spheres we have access to” (Fraser 1989: 11). Perhaps significantly, support for this type of emancipatory strategy can even be found in the work of the ultrapessimistic Adorno, who argues: In the history of civilization there have been not a few instances when delusions were healed not by focused propaganda, but, in the final analysis, because scholars, with their unobtrusive yet insistent work habits, studied what lay at the root of the delusion. (cited in Kellner 1992: vii) Such “unobtrusive yet insistent work” does not in itself create the social change to which Adorno alludes. The conceptual and the practical dangers of collapsing practice into theory must be guarded against. Rather, through their educational activities, proponent of critical security studies should aim to provide support for those social movements that promote emancipatory social change. By providing a critique of the prevailing order and legitimating alternative views, critical theorists can perform a valuable role in supporting the struggles of social movements. That said, the role of theorists is not to direct and instruct those movements with which they are aligned; instead, the relationship is reciprocal. The experience of the European, North American, and Antipodean peace movements of the 1980s shows how influential social movements can become when their efforts are harnessed to the intellectual and educational activity of critical thinkers. For example, in his account of New Zealand’s antinuclear stance in the 1980s, Michael C. Pugh cites the importance of the visits of critical intellectuals such as Helen Caldicott and Richard Falk in changing the country’s political climate and encouraging the growth of the antinuclear movement (Pugh 1989: 108; see also COrtright 1993: 5-13). In the 1980s peace movements and critical intellectuals interested in issues of security and strategy drew strength and succor from each other’s efforts. If such critical social movements do not exist, then this creates obvious difficulties for the critical theorist. But even under these circumstances, the theorist need not abandon all hope of an eventual orientation toward practice. Once again, the peace movement of the 1980s provides evidence of the possibilities. At that time, the movement benefited from the intellectual work undertaken in the lean years of the peace movement in the late 1970s. Some of the theories and concepts developed then, such as common security and nonoffensive defense, were eventually taken up even in the Kremlin and played a significant role in defusing the second Cold War. Those ideas developed in the 1970s can be seen in Adornian terms of the a “message in a bottle,” but in this case, contra Adorno’s expectations, they were picked up and used to support a program of emancipatory political practice. Obviously, one would be naïve to understate the difficulties facing those attempting to develop alternative critical approaches within academia. Some of these problems have been alluded to already and involve the structural constraints of academic life itself. Said argues that many problems are caused by what he describes as the growing “professionalisation” of academic life (Said 1994: 49-62). Academics are now so constrained by the requirements of job security and marketability that they are extremely risk-averse. It pays – in all senses – to stick with the crowd and avoid the exposed limb by following the prevalent disciplinary preoccupations, publish in certain prescribed journals, and so on. The result is the navel gazing so prevalent in the study of international relations and the seeming inability of security specialists to deal with the changes brought about by the end of the Cold War (Kristensen 1997 highlights the search of U.S. nuclear planners for “new targets for old weapons”). And, of course, the pressures for conformism are heightened in the field of security studies when governments have a very real interest in marginalizing dissent. Nevertheless, opportunities for critical thinking do exist, and this thinking can connect with the practices of social movements and become a “force for the direction of action.” The experience of the 1980s, when, in the depths of the second Cold War, critical thinkers risked demonization and in some countries far worse in order to challenge received wisdom, thus arguably playing a crucial role in the very survival of the human race, should act as both an inspiration and a challenge to critical security studies.

### 2NC RotJ

#### The Judge is a specific intellectual challenging the 1AC's discourse – this is someone who rejects generalities and finds weak points that rely on inaccurate modes of thought. You do not know specifically which direction but rather than asking ‘what is right?’ we embrace a constant problemetazation of the present – that’s Owen.

#### We must set aside the quest for blueprints in order to rethink our relationship to action

RBJ **Walker**, BA Wales, MA PhD Queen's University, Prof of Poli Sci Univ of Victoria, Prof of IR @ SPIRE, editor Millennium, Alternatives etc, One World Many Worlds: Struggles for a Just World Peace, 19**88**

Enquiry into human affairs, like all scientific enquiry, depends on a capacity to ask the right questions. This is sometimes forgotten by those who equate scientific analysis with the mechanical application **of supposedly objective research techniques**. I suggest that many of the most crucial questions are being asked and explored by critical social movements. To try to understand these questions is necessarily to follow an alternative critical logic. Moreover, enquiry into human affairs, **unlike enquiry in the sciences of inert matter** on which our dominant images of legitimate knowledge have come to be based, depends in large part on a capacity to interpret the meanings, values, and aspirations that guide the way people act. Historical change is both reflected in and affected by the way people grope for new meanings, new languages, new ways of interpreting their place in the world. A clearer articulation of the most pressing questions of the age can arise from listening carefully to the meanings, values, and aspirations that guide contemporary movements struggling to reconstruct the world in which they live. In this sense, critical social movements discover in practice what many scholars and academics discover more theoretically: The conventional categories of understanding seem out of joint with the times. For scholars and activists alike, it has become necessary to refuse received **conceptual boundaries, to search for new forms of understanding, and to develop a clearer sense of the complex relationships between theory and practice,** knowing and being. I do not claim in this book to give a conclusive insight into the major problems of the age. Nor do I have any straightforward answers to the perennial question, "What is to be done?" Indeed, I argue that **answers to this question formulated as blueprints for the future, are inherently undesirable**. A just world peace must grow out of the ongoing practices of people everywhere, not be molded by those **who claim to have a god's-eye view of what is going on**. It is sometimes **important to resist the inevitable demand for hard-nosed, concrete solutions to particular problems.** Credibility in contemporary political debate **too often depends on a willingness to present policy options** that might be carried out by existing governments and institutions. It is not that policy options are unavailable. On the contrary, whether about more-sensible arms control procedures, removing the burden of international debt, restructuring international trade or commodity pricing arrangements, and so on, policies that would undoubtedly improve the lot of millions of people are regularly aired in reports, international gatherings, and the more-serious news media. Although many such proposals deserve widespread support, the transformations necessary for a just world peace cannot come from government policies alone, no matter how enlightened these governments may be. Under present circumstances **the question "What is to be done?" invites a degree of arrogance that is all too visible** in the behavior of the dominant political forces of our time. It is an arrogance that is inconsistent with the kind of empirical evidence we have before us. This evidence requires a willingness to face up to the uncertainties of the age**, not with the demand for instant solutions, but with a more modest openness to the potentials inherent in what is already going on**. The most pressing questions of the age call not only for concrete policy options to be offered to existing elites and institutions **but also, and more crucially, for a serious rethinking of the ways in which it is possible for human beings to live together**. The call for a just world peace must be also a call for the reconstruction of political life. In this book I suggest that important insights into this deeper process are emerging from practices that are now under way. These insights make it possible to formulate responses to questions about what must be done **without capitulating to the illusion—so often dressed up in the pretentious and dangerous claim to realism—that our future lies in the hands of existing elites alone**. (6-8)

### AT World Getting Better (Busby)

#### Busby references Montiero and Pinker

#### Just says deadliness of war is declining -- disproves necessity of the plan

#### "Disengagement causes instability because US gets drawn in" -- alt' precludes that

#### Wars increasing

**Hadley 11**

Editor of History Today Kathryn, “Alarming increase in wars,” July, http://www.historytoday.com/blog/2011/07/alarming-increase-wars

New research by Professors Mark Harrison from the University of Warwick and Nikolaus Wolf from Humboldt University has revealed that between 1870 and 2001, the frequency of wars between states increased steadily by 2% a year on average. Between 1870 and 1913, the frequency of ‘pairwise’ conflicts (the numbers of pairs of countries involved in conflicts) increased on average by 6% per year. The frequency of wars increased by 17% per year in the period of the First and Second World Wars, and by 31% per year during the Cold War. In the 1990s, the frequency of wars between states rose by 36% per year. Professor Mark Harrison explained how: ‘The number of conflicts has been rising on a stable trend. Because of two world wars, the pattern is obviously disturbed between 1914 and 1945 but remarkably, after 1945 the frequency of wars resumed its upward course on pretty much the same path as before 1913.’ The graph below illustrates this increase in pairwise conflicts. It only includes wars between states and does not include civil wars. Conflicts range from full-scale shooting wars and uses of military force to displays of force (sending warships and closing borders, for example). Although Harrison and Wolf’s study does not measure the intensity of violence, it reflects the readiness of governments to settle disputes by force.

#### Pinker’s analysis is useless – entirely ignores role of population growth, which accounts for all of the change he cites

Flynn 12/7

Julian Flynn, Financial Times, “Angel thesis hangs on overpopulation,” December 7, 2011, http://www.ft.com/intl/cms/s/0/30bf527c-1cfb-11e1-a134-00144feabdc0.html#axzz1h1lHx8gS

Sir, Gideon Rachman’s article “The long shadow of the 1930s” (Comment, November 29) refers to Steven Pinker’s new book, *The Better Angels of Our Nature*, which makes the case that, statistically, humans have become less violent over the course of history. Mr Pinker deals with percentages of the global population. For example, his book states that the second world war ranks as only the ninth worst atrocity in history. Because he deals with percentages of the global population, his thesis absolutely depends on the exponential overpopulation of our species. The total of 50m-plus second world war dead only seems “smaller” because of the exponential growth of the human population. Mr Pinker’s “let’s be grateful for what’s gone right” message depends entirely on another issue (rampant overpopulation) which is an extremely serious sword of Damocles hanging over our planet.

## 1NR – Case, Exports

### 2NC Heg/War – Fettweis Biz

#### No wars absent hegemony – nuclear deterrence, globalization, insituitions and democracy will exist with or without the US and will check great power conflict

#### Reject their vague assertions for conflict scenarios absent hegemony – their authors overestimate the importance of the US - *star this card*

**Fettweis 11** [Christopher J. Fettweis - Department of Political Science Tulane University and Professor of National Security Affairs at the US Naval War College, “Free Riding or Restraint Examining European Grand Strategy”, Comparative Strategy; Sep/Oct2011, Vol. 30 Issue 4, p316-332, 17p, Chetan]

**Assertions that without** the combination of **U.S. capabilities, presence and commitments instability would return** to Europe and the Pacific Rim **are usually rendered in rather vague language**. If the United States were to decrease its commitments abroad, argued Robert Art, “**the world will become a more dangerous place** and, sooner or later, that will redound to America’s detriment.”53 **From where would this danger arise? Who** precisely **would do the fighting, and over what issues?** Without the United States, **would Europe really descend into Hobbesian anarchy? Would the Japanese attack** mainland **China again**, to see if they could fare better this time around? Would the Germans and French have another go at it? In other words, **where exactly is hegemony is keeping the peace?** With one exception, **these questions are rarely addressed**. That exception is in the Pacific Rim. Some analysts fear that a de facto surrender of U.S. hegemony would lead to a rise of Chinese influence. Bradley Thayer worries that Chinese would become “the language of diplomacy, trade and commerce, transportation and navigation, the internet, world sport, and global culture,” and that Beijing would come to “dominate science and technology, in all its forms” to the extent that soon theworldwould witness a Chinese astronaut who not only travels to the Moon, but “plants the communist flag on Mars, and perhaps other planets in the future.”54 Indeed Chin a is the only other major power that has increased its military spending since the end of the Cold War, even if it still is only about 2 percent of its GDP. Such levels of effort do not suggest a desire to compete with, much less supplant, the United States. The much-ballyhooed, **decade-long military buildup has brought Chinese spending up to somewhere between one-tenth and one-fifth of the U.S. level. It is hardly clear that a restrained United States would invite Chinese** regional, must less global, political **expansion.** Fortunately one need not ponder for too long the horrible specter of a red flag on Venus, since on the planet Earth, where war is no longer the dominant form of conflict resolution, the threats posed by even a rising China would not be terribly dire. The dangers contained in the terrestrial security environment are less severe than ever before. **Believers in the pacifying power of hegemony ought to keep in mind** a rather basic tenet: When it comes to policymaking, **specific threats are more significant than vague, unnamed dangers**. Without specific risks, it is just as plausible to interpret U.S. presence as redundant, as overseeing a peace that has already arrived. **Strategy should not be based upon vague images emerging from the dark reaches of the neoconservative imagination.**  Overestimating Our Importance One of **the most basic insights of cognitive psychology provides the final reason to doubt the power of hegemonic stability: Rarely are our actions as consequential** upon their behavior **as we perceive them to be.** A great deal of **experimental evidence exists to support the notion that** people (and therefore **states) tend to overrate the degree to which** **their behavior is responsible for the actions of others.** Robert Jervis has argued that two processes account for this overestimation, both ofwhichwould seem to be especially relevant in theU.S. case. 55 First, **believing that we are responsible** **for their actions gratifies our national ego** (which is not small to begin with; the United States is exceptional in its exceptionalism). The hubris of the United States, long appreciated and noted, has only grown with the collapse of the Soviet Union.56 **U.S. policymakers famously have comparatively little knowledge of—or interest in—events that occur outside of their own borders**. **If there is any state vulnerable to the overestimation of its importance due to the fundamental misunderstanding of the motivation of others, it would have to be the United States.** Second, policymakers in the United States are far more familiar with our actions than they are with the decision-making processes of our allies. Try as we might**, it is not possible to** fully **understand the threats, challenges, and opportunities that our allies see from their perspective.** The European great powers have domestic politics as complex as ours, and they also have competent, capable strategists to chart their way forward. **They react to many international forces, of which U.S. behavior is only one**. Therefore, for any actor trying to make sense of the action of others, Jervis notes, “in the absence of strong evidence to the contrary, the most obvious and parsimonious explanation is that he was responsible.”57 **It is natural**, therefore, **for U.S**. policymakers and **strategists to believe that the behavior of our allies (and rivals) is shaped largely by what Washington does**. Presumably Americans are at least as susceptible to the overestimation of their ability as any other people, and perhaps more so. At the very least, political psychologists tell us, **we are probably not as important to them as we think**. **The importance of U.S. hegemony in contributing to international stability is therefore almost certainly overrated**. In the end, one can never be sure why our major allies have not gone to, and do not even plan for, war. Like deterrence, **the hegemonic stability theory rests on faith; it can only be falsified, never proven**. It does not seem likely, however, that hegemony could fully account for twenty years of strategic decisions made in allied capitals if the international system were not already a remarkably peaceful place. **Perhaps these states have no intention of fighting one another to begin with**, and our commitments are redundant. European great powers may well have chosen strategic restraint because they feel that their security is all but assured, **with or without the United States**.

### 2NC Heg/War – Montiero Biz

#### There is no statistical proof that unipolarity has prevened conflicts – our Montiero evidence indicates there is an 18.2% chance conflict will break out under hegemony which is more than 4 times other systems

### Impact Overview – 2NC

#### Russian econ decline outweighs – Econ decline causes political upheaval which causes loose nukes and preemption- that’s Filger

#### And- It’s most likely scenario for nuclear war and causes US draw in

Steven **David**, Professor of Political Science, Johns Hopkins University, “Saving America From the Coming Civil Wars,” FOREIGN AFFAIRS, v 78 n 1, Jan/Feb **1999**, LN.

Only three countries, in fact, meet both criteria: Mexico, Saudi Arabia, and Russia. Civil conflict in Mexico would produce waves of disorder that would spill into the United States, endangering the lives of hundreds of thousands of Americans, destroying a valuable export market, and sending a torrent of refugees northward. A rebellion in Saudi Arabia could destroy its ability to export oil, the oil on which the industrialized world depends. And internal war in Russia could devastate Europe and trigger the use of nuclear weapons. Of course, civil war in a cluster of other states could seriously harm American interests. These countries include Indonesia, Venezuela, the Philippines, Egypt, Turkey, Israel, and China. In none, however, are the stakes as high or the threat of war as imminent.

#### Plus it’s the Only existential risk

Nick **Bostrom** (PhD Philosophy – Oxford U) **2002** Existential Risks, http://www.nickbostrom.com/existential/risks.html)

A much greater existential risk emerged with the build-up of nuclear arsenals in the US and the USSR. An all-out nuclear war was a possibility with both a substantial probability and with consequences that *might* have been persistent enough to qualify as global and terminal. There was a real worry among those best acquainted with the information available at the time that a nuclear Armageddon would occur and that it might annihilate our species or permanently destroy human civilization.[4]  Russia and the US retain large nuclear arsenals that could be used in a future confrontation, either accidentally or deliberately. There is also a risk that other states may one day build up large nuclear arsenals. Note however that a smaller nuclear exchange, between India and Pakistan for instance, is not an existential risk, since it would not destroy or thwart humankind’s potential permanently. Such a war might however be a local terminal risk for the cities most likely to be targeted. Unfortunately, we shall see that nuclear Armageddon and comet or asteroid strikes are mere preludes to the existential risks that we will encounter in the 21st century.

#### And it causes Miscalc

**Pry 99** (Peter Vincent, Former US Intelligence Operative, War Scare: U.S.-Russia on the Nuclear Brink,

Russian internal troubles—such as a leadership crisis, coup, or civil war—could aggravate Russia’s fears of foreign aggression and lead to a miscalculation of U.S. intentions and to nuclear overreaction. While this may sound like a complicated and improbable chain of events, Russia’s story in the 1990s is one long series of domestic crises that have all too often been the source of nuclear close calls. The war scares of August 1991 and October 1993 arose out of coup attempts. The civil war in Chechnya caused a leadership crisis in Moscow, which contributed to the nuclear false alarm during Norway’s launch of a meteorological rocket in January 1995. Nuclear war arising from Russian domestic crises is a threat the West did not face, or at least faced to a much lesser extent, during the Cold War. The Russian military’s continued fixation on surprise-attack scenarios into the 1990s, combined with Russia’s deepening internal problems, has created a situation in which the United States might find itself the victim of a preemptive strike for no other reason than a war scare born of Russian domestic troubles. At least in nuclear confrontations of the 1950s–1970s—during the Berlin crisis, Cuban missile crisis, and 1973 Middle East war—both sides knew they were on the nuclear brink. There was opportunity to avoid conflict through negotiation or deescalation. The nuclear war scares of the 1980s and 1990s have been one-sided Russian affairs, with the West ignorant that it was in grave peril.

### Exports Bad – Warming

#### Exports cause methane leaks – makes warming irreversible

**Romm 11** (Joe, Senior Fellow at American Progress, editor of Climate Progress, assistant secretary of energy for energy efficiency and renewable energy in 1997, Ph.D. in physics from MIT, “Natural Gas Bombshell: Switching From Coal to Gas Increases Warming for Decades, Has Minimal Benefit Even in 2100,” 9-9-11 <http://thinkprogress.org/climate/2011/09/09/315845/natural-gas-switching-from-coal-to-gas-increases-warming-for-decades/>)

A key finding of the NCAR study is: In summary, our results show that the substitution of gas for coal as an energy source results **in increased** rather than decreased **global warming** for many decades — out to the mid 22nd century for the 10% leakage case. This is in accord with Hayhoe et al. (2002) and with the less well established claims of Howarth et al. (2011) who base their analysis on Global Warming Potentials rather than direct modeling of the climate…. The most important result, however, in accord with the above authors, is that, unless leakage rates for new methane can be kept below 2%, substituting gas for coal is not an effective means for reducing the magnitude of future climate change. What is the leakage rate for methane? Well, as I’ve written, we don’t know exactly because the gas companies won’t release all of their data. We do know that total life-cycle leakage and fugitive emissions from extraction, production, transport, and consumption is higher for shale gas than conventional gas. The controversial — but peer-reviewed — paper by Cornell’s Robert Howarth, which I wrote about here, seeks to quantify the impact of the leakage from the **best available data**. It **concluded**: Natural gas is composed largely of methane, and 3.6% to 7.9% of the methane from shale-gas production escapes to the atmosphere in venting and leaks over the life-time of a well. These methane emissions are at least 30% more than and perhaps more than twice as great as those from conventional gas. The higher emissions from shale gas occur at the time wells are hydraulically fractured — as methane escapes from flow-back return fluids — and during drill out following the fracturing. Methane is a **powerful greenhouse gas**, with a global warming potential that is far greater than that of carbon dioxide, particularly over the time horizon of the first few decades following emission.

**Nuclear war causes warming**

**Turco et. Al** **08**

Toon: chair of the Dept of Atmospheric and Oceanic Sciences and a member of the Laboratory for Atmospheric and Space Physics at the University of Colorado @ Boulder. Robock is a Proff of atmospheric science at Rutgers University in New Brunswick, New Jersey. Turco is a professor of atmospheric science at the University of California, Los Angeles, (Owen B. Toon, Alan Robock, and Richard P. Turco, “Environmental consequences of nuclear war,” 2008 American Institute of Physics, December 2008 Physics Today 37-42, http://www.plu.edu/~haykm/332\_Course\_Material/current\_events/NuclearWar.pdf)

Complementary to temperature change is radiative forcing, the change in energy flux. Figure 3b shows how nuclear soot changes the radiative forcing at Earth’s surface and com- pares its effect to those of two well-known phenomena: warming associated with greenhouse gases and the 1991 Mount Pinatubo volcanic eruption, the largest in the 20th century. Since the Industrial Revolution, greenhouse gases have increased the energy flux by 2.5 W/m. The transient forcing from the Pinatubo eruption peaked at about −4 W/m 2 (the minus sign means the flux decreased). One implication of the figure is that even a regional war between India and Pakistan can force the climate to a far greater degree than the greenhouse gases that many fear will alter the climate in the foreseeable future. Of course, the durations of the forcings are different: The radiative forcing by nuclear-weapons-gen- erated soot might persist for a decade, but that from green- house gases is expected to last for a century or more, allow- ing time for the climate system to respond to the forcing. Accordingly, while the Ice Age–like temperatures in figure 3a could lead to an expansion of sea ice and terrestrial snow- pack, they probably would not be persistent enough to cause the buildup of global ice sheets. Agriculture responds to length of growing season, tem- perature during the growing season, light levels, precipita- tion, and other factors. The 1980s saw systematic studies of the agricultural changes expected from a nuclear war, but no such studies have been conducted using modern climate models. Figure 4 presents our calculations of the decrease in length of the growing season—the time between freezing temperatures—for the second summer after the release of soot in a nuclear attack.

### Exports Bad – Turns Renewables/Modeling

#### Exports cause international adoption of natural gas – that crowds out renewables

Simmons 12 (Bradford, Editor-in-Chief, “The Editor's Monthly Memo: The Staggering Implications of the U.S. Natural Gas Market,” International Affairs Review, 8-12, http://www.iar-gwu.org/node/429)

At home, a cautious, yet supportive approach to LNG exports would have ancillary benefits as well. With coal plants retiring every year and the declining economic viability of nuclear power, natural gas is well positioned to vastly expand its 30 percent share of electricity production. While this will translate into lower utility bills for U.S. consumers, it also raises the specter of overreliance. If natural gas exceeds a 50 percent share of power generation, any source disruptions or sudden price fluctuations would have a calamitous economic impact. Furthermore, such cheap gas could potentially crowd out other promising sources of energy, such as renewables. Though natural gas fired plants produce roughly half the carbon of a coal plant and have contributed to an overall reduction in emissions in the United States, a recent International Energy Administration report reveals that a shift to gas generated electricity will not prove sufficient to significantly alter current climate change scenarios.

### Turns Heg

#### Russian Instability Turns heg

**Baran et al, 2007** (Zeyno, Senior Fellow and Director of the Center for Eurasian Studies at the Hudson Institute, “U.S-Russia Relations: Is Conflict Inevitable?”, Hudson Institute Symposium on U.S.-Russia Relations, www.hudson.org/files/pdf\_upload/Russia-Web%20(2).pdf)

The West needs a stable Russia in order to maintain the global balance of power against China. In the event of Russia’s disintegration, her resources will go to China, not the West. The West cannot stop Russia’s slide into a systemic crisis, and can only help get out of it once it has begun. This is a challenge for the future. Currently, the West needs a “Cold War” only with Russia’s new masters, not with the Russian people. Russians are protesting against the politics of the Russian bureaucracy, and their protest should not be re-directed at the bureaucracy’s strategic partners in the West. If the West understands and accepts this, it needs to learn to acknowledge Russians’ rights to patriotism and to a normal level of freedom—not as a religious symbol, but as the only path to prosperity and justice. Russian “democrats” and “liberals” have forgotten these demands and rights, and therefore the terms “dem - o crat” and “liberal” are cursed in Russia. Official propaganda uses this to divert Russian citizens from asserting their interests and rights to fighting the West. The West needs to explain to Russia that these rights have been destroyed not by rivalry with the West, but solely by the avarice of the new Russian leaders. It is true that in the future, the issue of global competition will arise. Currently, however, there is only one key problem—corruption (including, of course, corruption in the interests of the West) and a lack of bureaucratic integrity. After Russia experiences a systemic crisis the West must be able to say to Russians; “You see? We are for democracy, but not for “democrats,” for law, but not for lawyers, for prosperity, but not for prospering oligarchs.” All of these are things that the West could not say after the 1990s. Russia will be useful to the West if the West can side with Russia against China and global Islam in foreign policy and with the Russian people against the Russian bureaucracy in domestic policy. If the West attempts to transform Russia according to its own conceptualization of the correct societal order, or simply to seize Russian raw materials, intellect, and money, it will destroy Russia and pay dearly for the relatively small gain. As a consequence of doing so, the West will experience large-scale, global systemic problems.

### A2: No U.S. Draw In

#### Can’t solve - Collapse Causes Russia First strike on the U.S.

**Ruddy 99**

(Christopher, “Russia and China Prepare for War – Part 4…Russia May Launch a Surprise Attack Against US”, Newsmax, http://archive.newsmax.com/articles/?a=1999/3/12/53227)

The collapse of Russia's economy greatly increased the chances of war with the West. With 29 times Finland's population, Russia's budget barely matches theirs. According to news reports, millions of ordinary Russians are now struggling just to stay alive, selling family heirlooms and chopping up their furniture for kindling. Russia's political leaders and economic czars, of course, will never admit that they and their failed totalitarian system are responsible for this widespread misery, and increasingly the West is being blamed. This is particularly dangerous, because despite economic desperation, Russia continues is still a nuclear superpower. Victor Olove, director of Moscow's Center for Policy Studies, told the Los Angeles Times, "People who have nuclear warheads in their hands have not gotten their salaries for three or four months and are literally hungry." Some press reports show how close to war we have already come. Britain's Panorama news program reported that in 1995 the Yeltsin government came within minutes of a full nuclear attack on the United States after Russian defense systems failed. US DETROYS NUCLEAR ARSENAL, RUSSIAN ARSENAL EXPANDS Since the end of the Cold War, the United States has been systematically destroying its nuclear arsenal. In 1991, the US had approximately 30,000 strategic and tactical nuclear weapons. Under Clinton, that arsenal has fallen nearly 60%. In 1997, the United States had only 12,500 (tactical and strategic) nuclear weapons. Of these, only 8,750 were active, 2500 more were on reserve, and 1,250 were slated to be destroyed. Moreover, our nuclear arsenal has a limited "shelf life," and year by year, more and more weapons become unusable. The Clinton administration has only recently taken belated steps to produce tritium, a necessary component for the maintenance of nuclear weapons. In contrast, the Russians may now have as many as 50,000 strategic and tactical nuclear weapons -- ranging from small suitcase bombs to large warheads suitable for intercontinental ballistic missiles (ICBM's). The lion's share of these weapons remain targeted at the US. And Russia is quickly building even more weapons. Never before has the strategic nuclear balance been so greatly in Russia's favor. From a military standpoint, this creates a unique window of opportunity for Russia to launch a successful first-strike against the United States at minimal cost to themselves. "USE IT OT LOSE IT" Like America's nuclear arsenal, Russia's is degrading as it gets older and requires expensive, periodical servicing. The Russian government is well aware of this problem. In a recent report to the Duma (Russia's Congress), First Deputy Prime Minister Yuri Masluyokov (a former Soviet military-industrial planner) states that because of obsolescence, Russia's nuclear arsenal will decline quickly, and Russia may "be able to field only 800 to 900 nuclear warheads seven years from now." Because of Russia's economic problems, Russia may never again enjoy the huge strategic advantage it now has over its old enemies in the West. For die-hard communists, the huge, but temporary, military advantage may represent an irresistible opportunity to "use them before we lose them." Indeed, Bruce Blair, a well-known liberal from the Brookings Institution, stated last summer in The National Interest, "Russia's conventional forces have declined ... and into this vacuum has rushed a growing reliance on nuclear weapons -- including their first use in any serious conventional conflict."

### Nuclear Power – 2NC

#### Nuclear power causes LNG exports – demand is rising especially from manufacturing, nuclear trades off and puts downward pressure on prices – makes exports viable – that’s Perry.

#### No turns – nuclear removes the floor under natural gas prices

ISA 12 (iStockAnalyst, “Weak Nuclear Power Output Should Support U.S. Natural Gas Prices,” 11-29, http://www.istockanalyst.com/finance/story/6165585/weak-nuclear-power-output-should-support-u-s-natural-gas-prices)

U.S. natural gas sold off sharply in recent days, driven mostly by warmer weather forecasts. Bloomberg: - Gas dropped as much as 3.8 percent as forecasters including MDA Weather Services predicted above-normal temperatures for most of the lower 48 states over the next 10 days. Unusually cold weather helped reduce a supply glut this month. The December contract expires today. "The weather is moderating so it's wearing a little bit on the market," said Tom Saal, senior vice president of energy trading at INTL Hencorp Futures LLC in Miami. "We've got an expiring contract today, that could be part of it." The declines however should be **limited due to reduced nuclear power generation**. A large number of nuclear plants have been down unexpectedly and it may take time to bring them online. US nuclear generation is materially below normal for this time of the year, which should provide a floor to natural gas prices.

#### Natural gas prices are rising BECAUSE nuclear power is declining – the plan reverses that

Prezioso 12 (Jeanine, “REFILE-Storm-closed US nuclear power plants may boost natgas use,” Reuters, 10-31, http://www.reuters.com/article/2012/10/31/sandy-natgas-demand-idUSL1E8LV3UF20121031)

As the U.S. Northeast begins its recovery from Hurricane Sandy and power is slowly restored, natural gas may be one market that benefits. The much-touted cleaner-burning fuel could be a replacement for nuclear power generation, which faces the highest level of outages since spring 2011. Massive flooding and electric grid outages from the storm caused three U.S. nuclear reactors totaling 2,800 megawatts (MWs) to shut. Those reactors and others that had already been offline could face longer inspections to check equipment following the storm. The United States last year initiated closer scrutiny of U.S. nuclear plants and their safety features following the earthquake, tsunami and subsequent flooding in Japan that caused a nuclear plant meltdown there. That lost nuclear power would likely be replaced incrementally with gas-fired electricity, **boosting demand for the fuel**. "If you reduce that demand, you could see a significant reliance on gas, especially in the east where coal generation isn't all that profitable anymore," said Eric Bickel, commodity analyst with Summit Energy in Louisville, Kentucky. Sandy hit during a month when many nuclear reactors were offline for scheduled maintenance anyway. But since March 2011, when the massive earthquake followed by a tsunami caused flooding and a meltdown at Tokyo Electric Power Co's Fukushima Daiichi nuclear plant, the world's nuclear power regulators have taken more precautions. "That's been an influential factor since that happened. You do have more stringent safety precautions now and you want to make sure everything is sound before you embark on putting them back online," said Bickel. SHORT TERM DEMAND LOSS On the flip side, Sandy has created a short-term vexing problem for an already oversupplied natural gas market: less immediate demand for the fuel and a short-term drop in prices until winter. The lack of power demand translates to a decrease in natural gas usage of about 1 billion cubic feet per day (bcfd), analysts said, which could generate about 5,000 MWs of electricity. At its peak, Sandy's fierce wind created tumultuous storm surges along the east coast that flooded power stations, caused transformers to explode and knocked out electricity to more than 8 million homes and businesses. The loss of that electricity usage may lessen demand for natural gas-generated power. Electric heat is not common in the Northeast, but gas heat for homes is. More than half of U.S. homes use gas as a heating fuel in winter, which is fast approaching, another factor that will increase demand.

#### Nuclear power crowds out natural gas demand – makes exports viable

Patel 12 (Simit – Metals and Energy Investor, “Cheap Natural Gas Won't Destroy The Nuclear Power Industry”, 4/12, http://seekingalpha.com/article/494121-cheap-natural-gas-won-t-destroy-the-nuclear-power-industry)

The other part of the equation here is nuclear power. How will nuclear power, which is also baseload and emission-free, be impacted by cheap natural gas? Certainly, I think cheap natural gas slows down the case for nuclear. It should still be noted, though, that because of the unrivalled energy density of nuclear power, it will ultimately **prove to be cheaper and more scalable** than any other energy source out there. Density is the primary consideration when evaluating the quality of energy sources, and nuclear remains king. Another consideration with natural gas is that while prices are currently cheap, **there is no guarantee that prices will stay this way**. With nuclear, prices are very predictable. The primary cost of nuclear power is an upfront fee, as the marginal fuel costs are very small. Natural gas prices have been very low before, and, in fact, they were low right after the Three Mile Island nuclear accident in 1979. The uncertainty of natural gas prices, and the fact that such prices will significantly impact energy prices derived from natural gas plants, make a strong case for diversifying into other energy sources. And with emissions regulations (for better or worse) becoming more common and with peak oil here, the case for diversification into nuclear remains strong. It should also be noted that demand for energy has been fairly constant over the past few years due to greater energy efficiency and a global depression borne out of a sovereign debt crisis - but such depressed demand is unlikely to remain. The U.S. Energy Information Administration (EIA) released a report in September of 2011 which projects that world energy use will increase 53% from 2008 to 2035. The report, International Energy Outlook 2011, says China and India will account for half of the projected increase. In this regard it is especially important to note that both China and India remain committed to nuclear power. Indeed, I think this is a simple guideline for investors in the nuclear power sector keep an eye out for. So long as China and India are interested in nuclear power, demand can go higher. The remarkably cheap prices for natural gas may slow down the nuclear renaissance, but it won't stop it. I believe that patient investors, those willing to wait up to a decade, will be rewarded accordingly. I did once believe that the end of the Megatons to Megawatts program could lead to a sharp and imminent rise in uranium prices for nuclear fuel. I'm a little less confident in that view, as I think cheap natural gas prices could make the situation less urgent and create some other options in the short-term. But as energy demand goes back up, and as the market as a whole continues to rise due to aggressive inflationary monetary policy from the world's central banks, natural gas prices will follow - and **the case for nuclear power will remain strong.**

#### plan tradeoffs off with NG consumption – makes exports viable

Levi 12 (Michael, Senior Fellow for Energy and Environment – Council on Foreign Relations, “How to Stop Natural Gas Exports,” CFR, 8-27, http://blogs.cfr.org/levi/2012/08/27/how-to-stop-natural-gas-exports/)

I actually agree with much of the sentiment. If the United States exports as much natural gas as many currently envision, it will probably be a sign that U.S. policy has failed. But the right response is not to bar exports – it’s to directly boost other sources of natural gas demand. The underlying logic is similar across different uses for natural gas. Exports raise natural gas prices. That reduces natural gas use in other sectors. Conversely, though, boosting natural gas consumption in other sectors increases natural gas prices. That reduces exports. This applies no matter what the alternative use is for natural gas. Want to use natural gas as a more climate-friendly substitute for coal? Implement a carbon price, clean energy standard, or regulation that promotes greater use of gas. Natural gas prices will rise. As a result, the gap between U.S. and overseas natural gas prices will shrink. Some export projects will no longer be viable. Exports will thus decline. How about natural gas as a transport fuel? Same thing. Write CAFE standards in a way that boosts the use of natural gas in cars and trucks, subsidize the purchase of natural gas vehicles, or raise oil and gasoline taxes, and more people will use natural gas for transport (including through conversion of natural gas to methanol and other fuels). Natural gas prices will rise, the gap between U.S. prices and overseas ones will decline, and exports will no longer be as attractive. The same thing even holds for natural gas use in manufacturing. I happen to find arguments in favor of using policy to steer natural gas into manufacturing suspect. But perhaps you don’t. Then subsidize manufacturing, as several administrations have done (and continue to do) through the tax code. You know the routine by now: more gas use in manufacturing will boost prices, and exports will decline. We can even put some numbers on this. Recent modeling by the EIA suggests that a modest price on carbon could raise natural gas use in the power sector by as much as five billion cubic feet a day as of 2020. Using natural gas to back out a million barrels of oil a day in the transport sector could add roughly six billion cubic feet a day of demand beyond that. The EIA has recently estimated what that much new demand might do to natural gas prices (though in a different context). **Assuming no surprises on the supply side**, natural gas prices circa 2020 would rise from about six dollars to between seven and eight dollars for a thousand cubic feet. This would erode a decent part (if not all) of any edge that U.S. exports might have. The result would be lower (or vanishing) exports in the first place. What if U.S. shale gas resources turn out to have been overestimated? The combination of scarcer gas and a big boost in domestic demand would crank prices up quickly. It would not be surprising to see prices rise well above ten dollars for a thousand cubic feet (though demand in other sectors would probably fall to restrain that increase). Needless to say, with natural gas prices that high, exports would most likely become uneconomic. U.S. exporters would probably still do just fine – their contracts typically guarantee payment for liquefaction services regardless of whether those services are actually used. Actual exports, though, would not materialize in any meaningful quantity. **None of these domestic policies**, of course, **would be easy to implement. But blocking exports isn’t an effective substitute**. Barring exports would do far less than even mediocre climate policy to move natural gas into power plants. Moreover, it would actually undermine **renewable energy, nuclear power**, and energy efficiency. Its impact on natural gas use in transport would be negligible. People who want to see the United States make better use of its natural gas have only one option: they **will need to promote those better uses directly**.

### U – No Exports

Ebinger evidence – indicates that Doe perceives shale as unsustainable and will refuse to export it – increases in usage in power plants means that they will be reluctant to do so

#### No exports now – doesn’t meet “public interest” and there’s political opposition especially from manufacturers

Caryl 12-21 (Ben, Associate – Kelley & Drye, “U.S. Department of Energy Seeking Comments on Impact of Natural Gas Exports,” West Virginia Manufacturers Association, 2012, http://www.wvma.com/201212211075/Latest-News/us-department-of-energy-seeking-comments-on-impact-of-natural-gas-exports.html)

On December 5, 2012, the U.S. Department of Energy (“DOE”) published a study concluding that allowing increased exports of liquefied natural gas (“LNG”) would provide a net economic benefit to the U.S. economy, although such increased exports could raise domestic gas prices and undermine the current competitive advantage of energy-intensive U.S. manufacturers. DOE is now accepting comments from stakeholders on the LNG Export Study to assist it in deciding whether to approve 15 pending applications for permits that would allow additional LNG exports of LNG projected to equal to roughly one-third of total U.S. production. DOE commissioned private contractor NERA Economic Consulting to prepare the LNG Export Study, and DOE made clear that it does not take a position regarding NERA’s findings at this time, although the Obama Administration has said that the study would be central to its decision on whether to approve additional LNG exports. Only a few years ago, a number of energy companies were planning to build facilities to import LNG into the United States. Technological advances in hydraulic fracturing and horizontal drilling, however, have resulted in large increases in U.S. natural gas production, resulting in record natural gas production and a 10-year low in gas prices in the United States. These developments are causing a surge of new U.S. manufacturing activity and investment, particularly in high-value, energy-intensive businesses like steel, aluminum, plastics, glass, vehicles and packaging, as well as producers of chemical and fertilizer. Prevailing low natural gas prices gives U.S. manufacturers an important competitive advantage relative to their foreign competitors. Other nations with significant natural gas reserves, including China, are attempting to catch up to the United States’ increased production, but are years behind in terms of development of the needed infrastructure and technology. The substantial production increases have also led U.S. energy companies to seek authorization to sell gas in global markets to take advantage of higher international prices (for example, the price for natural gas is under $4 per million BTUs in the United States, while it is about $17 per million BTUs in Japan). Under U.S. law, an entity cannot export natural gas until it receives DOE authorization, as well as approval of its export liquefaction facilities from the Federal Energy Regulatory Commission (“FERC”). DOE examines LNG export applications to determine whether they serve the “public interest.” Applications to export LNG to nations with which the United States has a free trade agreement (“FTA”) are presumed to serve the “public interest,” while applications to export LNG to non-FTA nations receive more scrutiny from DOE in order to determine whether the exports would serve the “public interest” based on the exports expected impact on balance of trade, energy security, the environment, and job creation. In August 2012, DOE issued a final authorization for LNG exportation for Sabine Pass Liquefaction, LLC (“Sabine Pass”). DOE still has pending before it, however, decisions on 15 applications from companies seeking to export as much as 21.5 billion cubic feet of gas per day. DOE will consider comments on the LNG Export Study in evaluating whether to grant these pending applications. The deadline for the submission of comment is January 24, 2013, and the related deadline for the submission of reply comments is February 25, 2013. The question of whether to approve the applications obviously raises highly sensitive political issues. Gas producers are eager to export, while environmental groups fear that allowing exports would encourage more natural gas production. Large consumers, including manufacturers and chemical producers are concerned that large volumes of U.S. LNG exports could raise domestic gas prices, decreasing their current cost advantage over foreign competitors. Proponents of restricting U.S. exports claim that natural gas brings much bigger benefits as a feedstock for the U.S. manufacturing and petrochemical industries than as an export. The LNG Export Study, however, found that “impacts will not be positive for all groups of the economy,” including energy-intensive manufacturers with significant exposure to foreign competition, but that the net effect on national employment would be negligible because employment in such industries represents “about one-half of one percent of total U.S. employment.” Further, several business groups have argued that the U.S. law requiring companies to secure approval from DOE in order to export LNG amounts to a violation of the United States’ international obligations under the World Trade Organization (“WTO”) because the law establishes a discretionary, non-automatic export licensing requirement. Lastly, a number of members of Congress have expressed growing concerns about the economic consequences of LNG exports. For example, Senator Wyden, who will become the Chairman of the Senate Energy and Natural Resources Committee when the new Congress convenes in January 2013, has called on DOE to ensure that exports do not harm U.S. consumers and manufacturers and do not “squeeze out” new, natural gas-related investments that have been proposed in the U.S. chemical, industrial, and electric generation sectors. Representative Markey introduced legislation in 2012 that would further restrict U.S. exports of natural gas. As a result, there is likely to be continued policy debate on the merits of increased LNG exports from economic, energy security, international trade, and environmental perspectives. Kelley Drye & Warren is closely monitoring these issues. On October 23, 2012, we convened key members of the oil and gas industry and energy-intensive manufacturing industries for the first in a series of conferences entitled “Hydraulic Fracturing, Natural Gas and the U.S. Manufacturing Renaissance.” The next conference will take place in early 2013 in Washington, DC and focus on federal regulations that could impact the natural gas industry. For more information on the potential effects that U.S. natural gas export policy could have on the competitiveness of domestic manufacturing, or assistance in submitting comments to the DOE on the LNG Export Study, please contact John Herrmann or Benjamin Blase Caryl.

#### Conclusive ev – manufacturers will block exports, but new supply appeases concern

Dlouhy 12-6 (Jennifer A., Energy Policy – Houston Chronicle, “Manufacturers pushing hard against LNG exports,” Fuel Fix, 2012, http://fuelfix.com/blog/2012/12/06/manufacturers-pushing-hard-against-lng-exports/)

Manufacturers terrified that rising natural gas prices threaten their bottom lines are stepping up pressure on the Obama administration to limit exports of the fossil fuel in the wake of a study that said selling more overseas would broadly benefit the United States. The government-backed report released Wednesday will be a major factor as the Energy Department weighs whether to grant applications from 15 companies to export a total of 21.5 billion cubic feet of natural gas daily to countries that don’t have free trade agreements with the United States. But chemical and manufacturing industry leaders insist if the Energy Department approves too many export licenses, natural gas prices would be pushed skyward, jeopardizing some $90 billion in planned capital spending. Dow Chemical’s vice president of climate change and energy, George Biltz, said the move also would threaten $4 billion in that company’s planned capital spending. Dow projects linked to abundant, inexpensive natural gas supplies include ethylene, propylene and herbicide facilities planned for St. Charles, La., and Freeport, Texas. Planned domestic manufacturing facilities were announced “with the assumption we would have available competitive and affordable natural gas,” Biltz said in an interview. “Our view is that too many exports would change that profile and would reduce the amount of investments that would be made.” It’s not clear where that magic number lies. Biltz didn’t offer one, and neither did the new study by NERA Economic Consulting, which concluded that even unlimited exports would benefit the country with up to $47 billion added to the gross domestic product — though not without some casualties. Most of the damage would be in the form of price increases for companies that have high demands for energy produced by burning natural gas or rely on the fossil fuel as a building block to produce chemicals, fertilizers and other products. Manufacturers say the study used outdated 2011 projections of demand for natural gas and that the report dismissed the effects on their sector while ignoring the positive contribution they have on the U.S. economy. “The report does not compare the economic benefits of exporting natural gas versus using it as a domestic jobs creator,” said Paul Cicio, president of the Industrial Energy Consumers of America. “If we use these resources domestically, it will maximize economic growth and job creation for this country.” Because natural gas prices aren’t set on a global market — and the cost in some Asian and European markets can be three to five times higher than in the U.S. — American manufacturers have competitive cost advantage when it comes to the fossil fuel and producing energy-intensive goods. Biltz stressed that if a single cubic foot of natural gas is exported, it gives the U.S. a one-time impact on the GDP. But, he added: “If you take that same cubic foot and you roll it through manufacturing, whether it’s steel or chemicals or pulp and paper or rubber, this has as much as a 20x impact when you roll it through the whole GDP of the country,” Biltz said. “And you get export products at the end of that value chain too.” Dow’s chairman and CEO, Andrew Liveris, said in a statement late Thursday that the report ignores that “manufacturing is the largest user of natural gas in the U.S. and creates more jobs and more value to the U.S. economy from natural gas than any other sector.” He added: “Policymakers have been given a flawed report that overlooks vital dynamics, including a manufacturing renaissance that is already underway and much needed by this country.” Manufacturers aren’t universally opposed to exports. And any rise in natural gas prices from exporting the commodity could be within the bounds of what the sector believes it can absorb. In testimony before Congress four years ago, a Dow executive noted that petrochemical production “landed in the U.S. at the natural gas equivalent price of $4 to $4.50/MMBtu.”) The government-backed report predicted that natural gas prices could jump as much as 33 cents per thousand cubic feet initially and up to $1.11 per thousand cubic feet after five years of gradually increasing exports. Some manufacturers whose products are used in drilling and processing also stand to take in some benefit from expanded natural gas development that could be spurred by exports that modestly bump up prices. A Dow Chemical subsidiary, Texas LNG Holdings, has a stake in the Freeport LNG project planned for Texas, among those awaiting the Energy Department’s export approval. **The new report doesn’t guarantee the Energy Department will green light new natural gas exports**, beyond the license it already gave to Houston-based Cheniere Energy to sell liquefied natural gas from its Sabine Pass terminal in southwest Louisiana. The Obama administration has promised to carefully weigh the impact of allowing more exports on domestic consumers and the manufacturing sector. The Energy Department stressed that it would be conducting its own review of the NERA study and accepting public comments through Jan. 24 before making any decisions on export licenses on a case-by-case basis. And the department is expected to devise some kind of roadmap for its decisionmaking — probably an internal guidance or regulatory plan that sets factors that will be considered when it reviews applications. Otherwise, there are few real options in current law and regulation for the Energy Department to approve some of the permit applications and reject others. Current law presumes that exports of natural gas are in the public interest, so rejecting them requires a demonstration that the foreign sales would harm the public. The flood of applications now pending before the Energy Department “creates a challenge for the administration in calculating the cumulative economic impact of projects, potentially limiting and rationing approvals to prevent adverse impacts,” FBR Capital Markets said in a research note to clients. But “without a rationing mechanism, operators would risk having export licenses reconsidered in the future if economic consequences materialize.” None of this is going to move quickly, suggests Kevin Book, managing director of ClearView Energy Partners. He predicts the first approval of a new license to export natural gas to a non-free trade country will late in the third quarter of 2013. According to Book’s ClearView Energy, in a research note to clients: “The DOE website says it will ‘begin to act’ at the close of the comment period, but it doesn’t establish any finite end-point for action, nor does DOE identify when its own review of the NERA study will conclude. Similarly, DOE does not mention plans to propose any formal rule or guidance, but we would be surprised if none were offered.” The fights will be bigger this time around. While Cheniere’s project garnered relatively muted opposition, the company’s export approval was a wake-up call to environmental opponents of the hydraulic fracturing process instrumental in unlocking natural gas reserves. Ever since, FBR Capital Markets analysts note, industrial and environmental groups have filed to intervene in pending applications, with the Sierra Club insisting that the Energy Department is required under existing federal laws to conduct environmental impact analyses of the proposed export projects and the extent to which they would expand hydraulic fracturing and domestic drilling. Critics also will be able to press their case before the Federal Energy Regulatory Commission, which takes the lead in vetting the siting of LNG facilities, even new export and liquefaction operations at existing sites. There may be more legal challenges, including petitions asking FERC to rehear cases it has already decided. And Book notes it’s possible public comments challenging the new government-backed study could be submitted as part of each application reviewed by the Energy Department, “conceivably (slowing) approvals down even more.” Dow’s Biltz did not rule out Dow pushing its argument before FERC. “It’s not going to surprise me to see more action on the FERC permits up front,” he said. “It’s certainly something Dow will have to look at.” Critical manufacturers also may have a chance to air their concerns early in the new year, if the House and Senate energy committees move quickly to schedule hearings on the issue. The incoming chairman of the Senate Energy and Natural Resources Committee has been critical of exporting natural gas and has called for a “time out” on foreign sales.

### U – Prices Rising (UGA/NU)

#### New demand for NG makes price spike inevitable

Moors 1-24 (Dr. Kent, internationally recognized expert in oil and natural gas policy, risk assessment, and emerging market economic development, “Betting on the Coming Boom in Natural Gas Prices,” Money Morning, 2013, http://moneymorning.com/2013/01/24/betting-on-the-coming-boom-in-natural-gas-prices/)

There is also something else happening this morning. Natural gas prices are moving up. There is still some way to go before these prices reach the $4 plus level (still the perceived breakeven point for a number of producers). Still, after testing the low $3 range earlier in the month, the temperatures in the East are certainly bringing gas back into perspective. Natural gas usage remains sensitive to temperatures and weather conditions during the winter. Last year's unusually warm temperatures depressed gas prices more than usual. That was because the amount of gas extractions was much above anticipated levels. The combination of lower demand and higher supply translated into a downward price pressures. But we are in a different environment for gas production than we were a few years ago. Until 2005, the assumption was that the U.S. would need to import more liquefied natural gas (LNG) to compensate for accelerating declines in conventional domestic production. LNG overcomes the primary problem faced by natural gas users. Available supply is traditionally limited to where pipelines are running. LNG, on the other hand, cools gas to a liquid, allowing it to be transported by tankers almost anywhere by water, regasified at an import terminal, and then injected into the local pipeline network. By the middle of last decade, estimates of how much domestic gas need would have to be imported via LNG were as much as 15% and as soon as 2020. But the ability to exploit unconventional deposits (shale and tight gas, coal bed methane) has dramatically changed the equation. The Rise of U.S. Export Terminals Companies are retrofitting current import terminals to export LNG from the U.S., using shale gas excess volume as the feeder stock. Of course, that also provides an additional source of revenue for producers and processors... and added potential for investors. From a current level of zero, global estimates are putting the American component in LNG trade at 9-12% as early as 2020. This will be starting in earnest next year (2014) and there are huge markets waiting in both Asia and Europe. Europe is a straight shot from East Coast (Cove Point, MD) and Gulf States (Sabine Pass) locations. However, the Asian market remains the main LNG consumer. There, the 2014 completion of a project to deepen and widen the Panama Canal will allow LNG tankers to use the shortcut and open Asia to U.S. LNG sales. But LNG is not the only or even the major demand spike underway for gas. It's what's happening elsewhere that will be the real boon for investors. Power Plant Retirements Swell The U.S. will be retiring at least 90 GW of electricity generation by 2020, with an additional 20-30 GW likely because of new non-carbon emission limits. The **vast majority of this is coal-fired and is being replaced by gas as the fuel of choice**. For each 10 GW replaced, 1.2 billion cubic feet of gas will be required daily. If only half of the expected capacity replacement occurs, the additional requirements would eliminate three times the current gas surplus in the market. The LNG and power needs will buttress the demand side regardless of what Mother Nature chooses to do this winter. There are also increasing usages in other areas: As replacement for crude oil as raw material for petrochemical production, fertilizer and all manner of plastics and components; In broad industrial uses from normal energy requirements to the development of new chemical and related lines (this industrial use likely to be the lack to kick in after a recession); and, In the expansion of LNG and compressed natural gas (CNG) as a vehicle fuel (already underway in heavy trucks). All of this has prompted upward revisions in what had been still weak gas pricing estimates. Most analysts are putting the target at about a dollar above current prices (currently this morning about $3.53 per 1,000 cubic feet, or million BTUs, the NYMEX futures contract unit). My estimate puts natural gas prices at around $4.65. However, just about everybody is looking at new utilizations for gas increasing the price to about $6 by as early as 2015 or 2016.

#### Prices will spike – predictive and qualified ev

Schwartzel 1-9 (Erich, Pittsburgh Post-Gazette, “U.S. report predicts rising natural gas prices in 2013-14,” 2013, http://www.post-gazette.com/stories/business/news/us-report-predicts-rising-natural-gas-prices-in-2013-14-669602/#ixzz2JUuPAG00)

Marcellus Shale drillers who have had to cut costs and disassemble rigs because of recent record-low natural gas prices should expect a reprieve over the next two years, according to the latest projections from the U.S. Energy Information Administration. The average price of natural gas is expected to increase by almost a dollar in 2013, hitting $3.74 per million British thermal units. That's a significant jump from the $2.75 average seen last year, when accelerated drilling created a glut in supply that caused prices to drop and made drilling in many places unprofitable. Increases are expected to continue into 2014, when prices are predicted to hit $3.90. The EIA report released Tuesday is the first look into 2014 for the domestic and international energy scene, and it includes projections that could affect gas and coal activity in Pennsylvania and surrounding states. Higher gas prices would send reverberations across multiple sectors, helping coal become competitive with natural gas again as an electricity source and allowing drillers to broaden their focus beyond shale formations that are rich in oil. In addition, the federal energy agency projects increased domestic oil production will break new records over the next couple of years and eventually lead to lower prices at the gasoline station. The report is the latest set of tea leaves for an industry that's been in flux: Enthusiasm for drilling was tempered in recent years by economic realities that made it risky for every rig to turn a profit. The low prices made natural gas an easy sell to large, industrial customers who consume a lot of energy, but slowed lease activity as companies waited for prices to rebound. If natural gas prices continue an upward trend toward $4 per mcf, companies that had drilled wells but weren't bringing the gas to market could decide it is worth hooking those wells up to pipelines and selling the gas, said Adam Sieminski, the EIA administrator. Natural gas consumption, meanwhile, is expected to be relatively flat in 2013, though the EIA forecasts an increase in its use to heat homes and offices over the next two years. Consumption in 2012 was low due to an unnaturally warm winter. Over the next several years, the EIA's projections call for a steady rise in natural gas prices, said Mr. Sieminski, "continuing to go up to $5 or $6 in the longer term."

### U – A2: Shale Gas Triggers Links

#### **1- Have to win definitively will export- otherwise just theoretical and our DOE specific cards outweigh**

#### 2- CX proves- no ev on how much shale there is- uniqueness debate above proves not sufficient to trigger link

#### **Natural gas abundance is a myth – shale gas is declining and studies don’t assume increased production**

Berman 12 (Art, Former Editor – Oil and Gas Journal, Geological Consultant – American Association of Petroleum Geologists, “After the Gold Rush: A Perspective on Future U.S. Natural Gas Supply and Price,” Oil Drum, 2-8, http://www.theoildrum.com/node/8914)

For several years, we have been asked to believe that less is more, that more oil and gas can be produced from shale than was produced from better reservoirs over the past century. We have been told more recently that the U.S. has enough natural gas to last for 100 years. We have been presented with an improbable business model that has no barriers to entry except access to capital, that provides a source of cheap and abundant gas, and that somehow also allows for great profit. Despite three decades of experience with tight sandstone and coal-bed methane production that yielded low-margin returns and less supply than originally advertised, we are expected to believe that poorer-quality shale reservoirs will somehow provide superior returns and make the U.S. energy independent. Shale gas advocates point to the large volumes of produced gas and the participation of major oil companies in the plays as indications of success. But advocates rarely address details about profitability and they never mention failed wells. Shale gas plays are an important and permanent part of our energy future. We need the gas because there are fewer remaining plays in the U.S. that have the potential to meet demand. A careful review of the facts, however, casts doubt on the extent to which shale plays can meet supply expectations except at much higher prices. One Hundred Years of Natural Gas The U.S. does not have 100 years of natural gas supply. There is a difference between resources and reserves that many outside the energy industry fail to grasp. A resource refers to the gas or oil in-place that can be produced, while a reserve must be commercially producible. The Potential Gas Committee (PGC) is the standard for resource assessments because of the objectivity and credentials of its members, and its long and reliable history. In its biennial report released in April 2011, three categories of technically recoverable resources are identified: probable, possible and speculative. The President and many others have taken the PGC total of all three categories (2,170 trillion cubic feet (Tcf) of gas) and divided by 2010 annual consumption of 24 Tcf. This results in 90 and not 100 years of gas. Much of this total resource is in accumulations too small to be produced at any price, is inaccessible to drilling, or is too deep to recover economically. More relevant is the Committee’s probable mean resources value of 550 (Tcf) of gas (Exhibit 4). If half of this supply becomes a reserve (225 Tcf), the U.S. has approximately 11.5 years of potential future gas supply at present consumption rates. When proved reserves of 273 Tcf are included, there is an additional 11.5 years of supply for a total of almost 23 years. It is worth noting that proved reserves include proved undeveloped reserves which may or may not be produced depending on economics, so even 23 years of supply is tenuous. If consumption increases, this supply will be exhausted in less than 23 years. Revisions to this estimate will be made and there probably is more than 23 years but based on current information, 100 years of gas is not justified. Shale Gas Plays May Not Provide Sustainable Supply Several of the more mature shale gas plays are either in decline or appear to be approaching peak production. Exhibit 5 shows that total Barnett Shale production is approximately 5.7 Bcf per day (Bcf/d) and cumulative gas production is more than 10 trillion cubic feet (Tcf) of gas. It also shows that production may be approaching a peak at current gas prices despite the constant addition of new wells. Exhibit 5. Barnett Shale Total Production. Source: HPDI. The Haynesville Shale surpassed the Barnett during 2011 as the most productive gas play in North America, with present daily rates of almost 7 Bcf/d and cumulative production of 3.5 Tcf (Exhibit 6). This play is most responsible for the current over-supply of gas with the average well producing 3.3 million cubic feet per day (Mcf/d) compared to only 0.4 Mdf/d in the Barnett. It is too early to say for sure, but the Haynesville Shale may also be approaching peak production. The Marcellus Shale is presently producing 2.4 Bcf/d and has produced a total of about 0.8 Tcf (Exhibit 7). In this play, production shows no sign of leveling off, as it does in the Barnett and Haynesville, and production in the Fayetteville Shale may also be approaching a peak (Exhibit 8). The Woodford Shale is already in decline (Exhibit 9). If some existing shale gas plays are approaching peak production after only a few years since the advent of horizontal drilling and multi-stage hydraulic fracturing, what is the basis for long-term projections of abundant gas supply?

#### Claims of abundant natural gas are industry bias and use manipulated data

Hughes 11 (J. David, Fellow in Fossil Fuels – Post Carbon Institute, Geoscientist – Geological Survey of Canada, and Team Leader – Canadian Gas Potential Committee, Abstract by Richard Heinberg, Senior Fellow-in-Residence – Post Carbon Institute, “Will Natural Gas Fuel America in the 21st Century?” Post Carbon Institute, May, http://www.postcarbon.org/reports/PCI-report-nat-gas-future-plain.pdf)

As this report details, all of these assumptions and recommendations need to be re-thought. What emerges from the data is a very different assessment. But if this report is right, then how could mainstream energy analysts have gotten so much so wrong? It is not our purpose to analyze in detail the social, political, and economic process whereby public relations became public policy. Nevertheless it is fairly easy to trace the convergence of interests among major players. First, the shale gas industry was motivated to hype production prospects in order to attract large amounts of needed investment capital; it did this by drilling the best sites first and extrapolating initial robust results to apply to more problematic prospective regions. The energy policy establishment, desperate to identify a new energy source to support future economic growth, accepted the industry’s hype uncritically. This in turn led Wall Street Journal, Time Magazine, 60 Minutes, and many other media outlets to proclaim that shale gas would transform the energy world. Finally, several prominent environmental organizations, looking for a way to lobby for lower carbon emissions without calling for energy cutbacks, embraced shale gas as a necessary “bridge fuel” toward a renewable energy future. Each group saw in shale gas what it wanted and needed. The stuff seemed too good to be true—and indeed it was. The biggest losers in this misguided rush to anoint shale gas as America’s energy savior are members of the public, who need sound energy policy based on realistic expectations for future supply, as well as sound assessments of economic and environmental costs.

### A2: Shale Triggers

#### Shale will dry up- Gazprom will survive

Begos 12

[Kevin, CSM, 10/1/12, <http://www.csmonitor.com/Environment/Latest-News-Wires/2012/1001/Natural-gas-boom-in-US.-Is-Russia-the-big-loser>]

But one top Gazprom executive said shale gas will actually help the country in the long run. Sergei Komlev, the head of export contracts and pricing, acknowledged the recent disruptions but predicted that the U.S. fuels wouldn't make their way to Europe on any important scale. "Although we heard that the motive of these activities was to decrease dependence of certain countries on Gazprom gas, the end results of these efforts will be utterly favorable to us," Komlev wrote in an email to the AP. "The reason for remaining tranquil is that we do not expect the currently abnormally low prices in the USA to last for long." In other words, if the marketplace for natural gas expands, Russia will have even more potential customers because it has tremendous reserves. Komlev even thanked the U.S. for taking the role of "shale gas global lobbyist" and said Gazprom believes natural gas is more environmentally friendly than other fossil fuels. "Gazprom group generally views shale gas as a great gift to the industry," he wrote. When natural gas prices rise, "it will make the U.S. plans to become a major gas exporter questionable." Whether exports happen involves a dizzying mix of math, politics and marketplaces, along with the fact that U.S. natural gas companies — and their shareholders — want prices to rise, too. James Diemer, an executive vice president for Pace Global, an international consulting company based in Virginia, believes that shale gas costs more to extract than the current market price. Pace, which recently released a report called "Shale Gas: The Numbers vs. The Hype," has been studying shale gas for Gazprom and other clients. "The capital will stop flowing" to U.S. shale gas, and the price will go up, Diemer predicted. He would not divulge the kind of work Pace is doing for Gazprom. Pace is owned by Siemens, a German company.

### Link Wall – 2NC

#### Plan curtails Russia lng exports- allows for price negotiation which causes countries to leave Russia to go to the U.S.- that’s Mead

#### Europe- plan eliminates Russia control of the market

Ratner, specialist in Energy Policy at Congressional Research Service, et al, 2012

(Michael Ratner –, Paul Belkin – Specialist in European Affairs, Jim Nichol – Specialist in Russian and Eurasian Affairs, Steven Woehrel – Specialist in European Affairs, March 13, 2012, Europe’s Energy Security: Options and Challenges to Natural Gas Supply Diversification, Congressional Research Service, p. 25)

Proposed U.S. LNG export projects, if all were constructed today, would make the United States the second largest LNG exporter behind Qatar. The proposed projects are at various stages in the regulatory approval process. Nevertheless, analysts have already begun speculating on what a significant increase in U.S. LNG exports would mean to natural gas markets, especially to European markets. Any volumes of LNG from the United States would benefit the market, including Europe, by offering a new supplier to consumers. For parts of Europe, especially the Baltic region and Central Europe, where the United States enjoys strong and friendly relations, any decision to export U.S. LNG to that region would be welcomed as a potential offset to their dependence on Russian gas. However, the bigger effect of U.S. entry into global LNG sales may be on pricing rather than supplies. The United States is one of the few countries that does not link its natural gas price to the price of oil and therefore may add to the pressure to delink the two commodities. Most natural gas sold in the world, by pipeline or as LNG, is sold under long-term contracts and indexed to the price of oil. Historically, the two commodities competed more directly in markets than they do today.

#### Asia- plan locks out all other competitors

Ebinger et al 12 (Charles, Senior Fellow and Director of the Energy Security Initiative – Brookings, Kevin Massy, Assistant Director of the Energy Security Initiative – Brookings, and Govinda Avasarala, Senior Research Assistant in the Energy Security Initiative – Brookings, “Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas,” Brookings Institution, Policy Brief 12-01, http://www.brookings.edu/~/media/research/files/reports/2012/5/02%20lng%20exports%20ebinger/0502\_lng\_exports\_ebinger.pdf)

Owing to growing gas demand, limited domestic supply, and a more rigid and expensive pricing structure, Asia represents a near-to-medium term opportunity for natural gas exports from the United States. The expansion of the Panama Canal by 2014 will allow for LNG tankers to traverse the isthmus, thereby improving the economics of U.S. Gulf Coast LNG shipments to East and South Asian markets. This would make U.S. exports competitive with future Middle Eastern and Australian LNG exports to the region. However, challenges and uncertainties remain on both the demand and supply side. The development of indigenous unconventional gas in China or India may occur at a faster rate than currently forecast, dampening demand for LNG imports to the region. A change in sentiment in Japan may see nuclear power restarted at a greater rate than currently anticipated; alternately, a greater-than-expected penetration of coal in the Japanese electricity sector would suppress gas demand. A change in the cost of Australian LNG production or a reversal of the Qatari moratorium on gas development could disrupt the current supply projections, as could the discovery of new conventional or unconventional resources. For instance, on December 29, 2010, Noble Energy, a U.S. oil and gas exploration company, discovered between 14 and 20 tcf of gas in Israel’s offshore Leviathan gas field. Since then, other nations on the Eastern Mediterranean are exploring for potentially similarly large gas fields. A number of large natural gas discoveries in Mozambique have also prompted early interest in building significant liquefaction capacity in the Southeastern African nation. The high quality (low sulfur and carbon-dioxide content) and liquid-rich nature of Mozambican gas may make this resource a significant competitor in global LNG markets in the medium term. Finally, the expansion of LNG export capacity from Alaska and the development of LNG export capacity in Western Canada may provide a source of strong competition for U.S. Gulf-coast origin LNG. Although Alaska’s Kenai LNG export facility, which has been exporting small quantities of LNG to Northeast Asia for over 40 years, has been idled temporarily, some companies have demonstrated interest in large-scale exports of LNG from Alaska to East Asia. On March 30, 2012, ExxonMobil, along with its project partners BP and ConocoPhillips, settled a dispute with the Government of Alaska to develop its gas re- sources at Prudhoe Bay. The gas from this field is expected to travel from Alaska’s North Slope to Valdez on Alaska’s southern coast, where it will be liquefied and exported.67 According to FERC, there are currently three Canadian export facilities under consideration in British Columbia: a proposed 1.4 bcf/day terminal at Kitimat (initial production would start at 0.7 bcf/day), which received a 20-year export license in October 2011; a proposed 0.25 bcf/day facility at Douglas Island; and a potential 1 bcf/day facility at Prince Rupert Island. Given the lower transportation costs (as a result of the shorter distance), Alaskan and West Canadian exports may prove to be a source of strong competition at the margin for U.S. LNG in the Pacific Basin.

#### That destroys Gazprom

UPI 12

[United Press International, 9/27/12, <http://www.upi.com/Business_News/Energy-Resources/2012/09/27/Gazprom-sets-eyes-on-Asian-economies/UPI-53151348737940/>]

A focus by Russian energy company Gazprom on Asian markets makes sense given the strength of the region's economy, an executive said from Vladivostok. Gazprom is hosting an Asia-Pacific annual oil and natural gas expo. Gazprom Deputy Chairman Alexander Medvedev, in his keynote address said Gazprom's prospects in the region are driven by demand. More than 85 percent of deliveries of liquefied natural gas from Gazprom were to Asia-Pacific countries in 2011. The company said it **aims to invest more than $14 billion on developments** in the Sakhalin region north of Japan. "Asia-Pacific represents a **premium market**," he said. "It is ready to pay more for gas than in the trading platforms of the USA and Europe." Far East countries, including Japan and South Korea, have or are planning natural gas deals with Gazprom. Opportunities also exist to the west in countries such as India and China, he added. "If we take into consideration that today these countries are considered to be the drivers of sustained economic growth, we are looking into the future of our export policy in the Asian markets with great optimism," said Medvedev.

#### Future projects- the plan makes them impossible

**Deutch, 11 --** MIT chemistry professor and former US Undersecretary of Energy (John, former Deputy Secretary of Defense and Director of Central Intelligence, "The Good News About Gas," Foreign Affairs, Jan/Feb 2011, 90:1, ebsco, accessed 5-22-1)

For Russia, the world's largest holder of natural gas, the impending lower gas prices and availability of natural gas elsewhere present many challenges, even though the country likely has plenty of shale gas. Russia should anticipate a drop in the significant revenue it currently receives from gas exports to Europe, under contracts that are not the result of an open bidding process and are linked to oil prices. As unconventional gas becomes available in Europe, consuming countries will insist on an open market with competition from diverse suppliers to meet demand. The Russian government needs revenue from natural gas exports to modernize the aging production and distribution network of its state-controlled gas company, Gazprom (at the very least to stop its pipelines from leaking methane, a powerful greenhouse gas). It also needs revenue to fund massive initiatives already under way, such as the Sakhalin Island oil and gas project, which includes liquefaction plants intended to ship LNG to Japan and other Asian markets.

### A2: No Extinction

#### 1. Short decision timeframes ensure full launch --- destroys all human beings.

**Starr 8** (Steven, Senior Scientist with Physicians for Social Responsibility, *Eliminate High-Alert, Launch-Ready Nuclear Weapons*, http://www.nucleardarkness.org/solutions/eliminatehighalertnuclearweapons/)

Resolution L.5: Decreasing the operational readiness of nuclear weapons systems It is clear from the historical record that the U.S. and Russia maintain hundreds of ballistic missiles armed with thousands of nuclear warheads which can be launched with only a few minutes warning. Common sense tells us that any weapon which can be used immediately is inherently more dangerous, and more susceptible to use, than one which requires time to prepare for use. Thus the US (with their allies, the UK and the French) ask the world to accept their claim, on the basis of faith alone, that they have constructed and operate complex nuclear weapon systems which are invulnerable to the risk of unintentional or accidental use. They make this assertion without providing any documentation or evidence, except for the fact that no obvious failure of these systems (resulting in launch) has yet occurred. However, common sense also tells us that there is no way to construct a command and control system - that employs thousands of human beings and computers - which is completely impervious to failure. Nothing is fool-proof to a sufficiently talented fool. Furthermore, claiming that nuclear weapon systems “are no longer targeted at states” is disingenuous and misleading. Most experts agree that de-targeting agreements do not slow down the launch process, because it only requires about 10 seconds to install launch coordinates in a normal launch sequence. Slight changes in the alert status, which do not in any significant way diminish the capacity to Launch-on-Warning nuclear weapon systems, makes no meaningful contribution to lessening the danger of accidental nuclear war based upon a false warning. And the possibility of deliberate sabotage and terrorism (designed to cause the launch of nuclear weapons) adds an increased level of risk which is impossible to calculate or ignore. Recent authoritative scientific studies predict that if the U.S.-Russian high-alert missiles are ever launched, and their warheads detonated over cities, the environmental consequences of this nuclear war would cause the destruction of most, if not all human beings. This is unacceptable because there is not now and has never been a national or political goal that justifies the complete destruction of all nations and peoples. Regardless of the degree of risk, however small it might be, it is immoral and illogical to take this chance. No nation or nations have the right to jeopardize the survival of humanity and life on Earth.

#### 2. Nuclear winter ensures all humans would die.

**Hellmam 8** (Martin, Professor emeritus of electrical engineering at Stanford University, The Bent of Tau Beta Phi, The Engineering Honor Society, *Risk Analysis of Nuclear Deterrence*, Spring 2008, http://www.nuclearrisk.org/paper.pdf)

In a 1961 speech to a joint session of the Philippine Congress, General Douglas MacArthur, stated, “Global war has become a Frankenstein to destroy both sides. … If you lose, you are annihilated. If you win, you stand only to lose. No longer does it possess even the chance of the winner of a duel. It contains now only the germs of double suicide.” Former Secretary of Defense Robert McNamara expressed a similar view: “If deterrence fails and conflict develops, the present U.S. and NATO strategy carries with it a high risk that Western civilization will be destroyed” [McNamara 1986, page 6]. More recently, George Shultz, William Perry, Henry Kissinger, and Sam Nunn4 echoed those concerns when they quoted President Reagan’s belief that nuclear weapons were “totally irrational, totally inhumane, good for nothing but killing, possibly destructive of life on earth and civilization.” [Shultz 2007] Official studies, while couched in less emotional terms, still convey the horrendous toll that World War III would exact: “The resulting deaths would be far beyond any precedent. Executive branch calculations show a range of U.S. deaths from 35 to 77 percent (i.e., 79-160 million dead) … a change in targeting could kill somewhere between 20 million and 30 million additional people on each side .... These calculations reflect only deaths during the first 30 days. Additional millions would be injured, and many would eventually die from lack of adequate medical care … millions of people might starve or freeze during the following winter, but it is not possible to estimate how many. … further millions … might eventually die of latent radiation effects.” [OTA 1979, page 8] This OTA report also noted the possibility of serious ecological damage [OTA 1979, page 9], a concern that assumed a new potentiality when the TTAPS report [TTAPS 1983] proposed that the ash and dust from so many nearly simultaneous nuclear explosions and their resultant firestorms could usher in a nuclear winter that might erase **homo sapiens**from the face of the earth, much as many scientists now believe the K-T Extinction that wiped out the dinosaurs resulted from an impact winter caused by ash and dust from a large asteroid or comet striking Earth. The TTAPS report produced a heated debate, and there is still no scientific consensus on whether a nuclear winter would follow a full-scale nuclear war. Recent work [Robock 2007, Toon 2007] suggests that even a limited nuclear exchange or one between newer nuclear-weapon states, such as India and Pakistan, could have devastating long-lasting climatic consequences due to the large volumes of smoke that would be generated by fires in modern megacities. While it is uncertain how destructive World War III would be, prudence dictates that we apply the same engineering conservatism that saved the Golden Gate Bridge from collapsing on its 50th anniversary and assume that preventing World War III is a necessity—not an option.

#### 3. Russian nuclear use would destroy the planet and end all human life.

**Caldicott 2** (Helen, Founder of Physicians for Social Responsibility, *The new nuclear danger*, Pg. 7-12)

If launched from Russia, nuclear weapons would explode over American cities thirty minutes after takeoff. (China's twenty missiles are liquidfueled, not solid-fueled. They take many hours to fuel and could not be used in a surprise attack, but they would produce similar damage if launched. Other nuclear-armed nations, such as India and Pakistan, do not have the missile technology to attack the U.S.) It is assumed that most cities with a population over 100,000 people are targeted by Russia. During these thirty minutes, the U.S. early-warning infrared satellite detectors signal the attack to the strategic air command in Colorado. They in turn notify the president, who has approximately three minutes to decide whether or not to launch a counterattack. In the counterforce scenario the US. government currently embraces, he does the US launches, the missiles pass mid-space, and the whole operation is over within one hour. Landing at 20 times the speed of sound, nuclear weapons explode over cities, with heat equal to that inside the center of the sun. There is practically no warning, except the emergency broadcast system on radio or TV, which gives the public only minutes to reach the nearest fallout shelter, assuming there is one. There is no time to collect children or immediate family members. The bomb, or bombs-because most major cities will be hit with more than one explosion-will gouge out craters 200 feet deep and 1000 feet in diameter if they explode at ground level. Most, however, are programmed to produce an air burst, which increases the diameter of destruction, but creates a shallower crater. Half a mile from the epicenter all buildings will be destroyed, and at 1.7 miles only reinforced concrete buildings will remain. At 2.7 miles bare skeletons of buildings still stand, single-family residences have disappeared, 50 percent are dead and 40 percent severely injured.' Bricks and mortar are converted to missiles traveling at hundreds of miles an hour. Bodies have been sucked out of buildings and converted to missiles themselves, flying through the air at loo miles per hour. Severe overpressures (pressure many times greater than normal atmospheric have popcorned windows, producing millions of shards of flying glass, causing decapitations and shocking lacerations. Overpressures have also entered the nose, mouth, and ears, inducing rupture of lungs and rupture of the tympanic membranes or eardrums. Most people will suffer severe burns. In Hiroshima, which was devastated by a very small bomb-13 kilotons compared to the current iooo kilotons-a child actually disappeared, vaporized, leaving his shadow on the concrete pavement behind him. A mother was running, holding her baby, and both she and the baby were converted to a charcoal statue. The heat will be so intense that dry objects-furniture, clothes, and dry wood-will spontaneously ignite. Humans will become walking, flaming torches. Forty or fifty miles from the explosion people will instantly be blinded from retinal burns if they glance at the flash. Huge firestorms will engulf thousands of square miles, fanned by winds from the explosion that transiently exceed 1000 miles per hour. People in fallout shelters will be asphyxiated as fire sucks oxygen from the shelters. (This happened in Hamburg after the Allied bombing in WWII when temperatures within the shelters, caused by conventional bombs, reached 1472 degrees Fahrenheit.)" Most of the city and its people will be converted to radioactive dust shot up in the mushroom cloud. The area of lethal fallout from this cloud will depend upon the prevailing wind and weather conditions; it could cover thousands of square miles. Doses of 5000 rads (a rad is a measure of radiation dose) or more experienced by people close to the explosion-if they are still aliv-will produce acute encephalopathic syndrome. The cells of the brain will become so damaged that they would swell. Because the brain is enclosed in a fixed bony space, there is no room for swelling, so the pressure inside the skull rises, inducing symptoms of excitability, acute nausea, vomiting, diarrhea, severe headache, and seizures, followed by coma and death within twenty-four hours. A lower dose of 1000 rads causes death from gastrointestinal symptoms. The lining cells of the gut die, as do the cells in the bone marrow that fight infection and that cause blood clotting. Mouth ulcers, loss of appetite, severe colicky abdominal pain, nausea, vomiting, and bloody diarrhea occur within seven to fourteen days. Death follows severe fluid loss, infection, hemorrhage, and starvation. At 450 rads, 50 percent of the population dies. Hair drops out, vomiting and bloody diarrhea occurs, accompanied by bleeding under the skin and from the gums. Death occurs from internal hemorrhage, generalized septicemia, and infection. Severe trauma and injuries exacerbate the fallout symptoms, so patients die more readily from lower doses of radiation. Infants, children, and old people are more sensitive to radiation than healthy adults. Within bombed areas, fatalities will occur from a combination of trauma, burns, radiation sickness, and starvation. There will be virtually no medical care, even for the relief of pain, because most physicians work within The United States owns 103 nuclear power plants, plus many other dangerous radioactive facilities related to past activities of the cold war. A 1000- kiloton bomb (1 megaton) landing on a standard iooo megawatt reactor and its cooling pools, which contain intensely radioactive spent nuclear fuel, would permanently contaminate an .' area the size of western Germany3 The International Atomic Energy Agency now considers these facilities to be attractive terrorist targets, ' post-September 11,2001. Millions of decaying bodies-human and animal alike-will rot, infected with viruses and bacteria that will mutate in the radioactive-environment to become more lethal. Trillions of insects, naturally ' resistant to radiation-flies, fleas, cockroaches, and lice--will transmit disease from the dead to the living, to people whose immune mechanisms have been severely compromised by the high levels of background radiation. Rodents will multiply by the millions among the corpses and shattered sewerage systems. Epidemics of diseases now controlled by immunization and good hygiene will reappear: such as measles, polio, typhoid, cholera, whooping cough, diphtheria, smallpox, plague, tuberculosis, meningitis, malaria, and hepatitis. Anyone who makes it to a fallout shelter and is not asphyxiated in it, will need to stay there for at least six months until the radiation decays sufficiently so outside survival is possible. It has been postulated that perhaps older people should be sent outside to scavenge for food because they will not live long enough to develop malignancies from the fallout (cancer and leukemia have long incubation periods ranging from five to sixty But any food that manages to grow will be toxic because plants concentrate radioactive elements.\*/ Finally, we must examine the systemic global effects of a nuclear . , war. Firestorms will consume oil wells, chemical facilities, cities, and forests, covering the earth with a blanket of thick, black, radioactive , I I ' smoke, reducing sunlight to 17 percent of normal. One year or more ' ) , will be required for light and temperature to return to normalper- "r haps supranormal values, as sunlight would return to more than its , , usual intensity, enhanced in the ultraviolet spectrum by depletion of the stratospheric ozone layer. Subfreezing temperatures could destroy the biological support system for civilization, resulting in massive starvation, thirst, and hypothermia.5 To quote a 1985 SCOPE document published by the White House Office of Science and Technology Policy, "the total loss of human agricultural and societal support systems would result in the loss of almost all humans on Earth, essentially equally among combatant and noncombatant countries alike . . . this vulnerability is an aspect not currently a part of the understanding of nuclear war; not only are the major combatant countries in danger, but virtually the entire human population is being held hostage to the large-scale use of nuclear weapons. . . .",! i The proposed START I11 treaty between Russia and America, even if it were implemented, would still allow 3000 to 5000 hydrogen bombs to be maintained on alert."he threshold for nuclear winter? One thousand loo-kiloton bombs blowing up loo cities7-a I c distinct possibility given current capabilities and targeting plans. On January 25,1995, military technicians at radar stations in northern Russia detected signals from an American missile that had just been launched off the coast of Norway carrying a US. scientific probe. Although the Russians had been previously notified of this launch, the alert had been forgotten or ignored. Aware that US. submarines could launch a missile containing eight deadly hydrogen bombs fifteen minutes from Moscow, Russian officials assumed that America had initiated a nuclear war. For the first time in history, the Russian computer containing nuclear launch codes was opened. President Boris Yeltsin, sitting at that computer being advised on how to launch a nuclear war by his military officers, had only a threeminute interval to make a decision. At the last moment, the US. missile veered off course. He realized that Russia was not under attack.' If Russia had launched its missiles, the US. early-warning satellites would immediately have detected them, and radioed back to Cheyenne Mountain. This would have led to the notification of the president, who also would have had three minutes to make his launch decision, and America's missiles would then have been fired from their silos. We were thus within minutes of global annihilation that day. ,' Today, Russia's early-warning and nuclear command systems are deteriorating. Russia's early-warning system fails to operate up to seven hours a day because only one-third of its radars are functional, and two of the nine global geographical areas covered by its missilewarning satellites are not under surveillance for missile detection.9 TO make matters worse, the equipment controlling nuclear weapons malfunctions frequently, and critical electronic devices and computers sometimes switch to combat mode for no apparent reason. According to the CIA, seven times during the fall of 1996 operations at some Russian nuclear weapons facilities were severely disrupted when robbers tried to "mine" critical communications cables for their copper!'" This vulnerable Russian system could easily be stressed by an internal or international political crisis, when the danger of accidental or indeed Intentional nuclear war would become very real. And the U.S. itself is not invulnerable to error. In August 1999, for example, when the National Imagery and Mapping Agency was installing a new computer system to deal with potential Y2K problems, this operation triggered a computer malfunction which rendered the agency "blind" for days; it took more than eight months for the defect to be fully repaired. As the New York Times reported, part of America's nuclear early-warning system was rendered incompetent for almost a year." (At that time I was sitting at a meeting in the west wing of the White House discussing potentially dangerous Y2K nuclear weapons glitches. Several Pentagon officials blithely reassured me that everything would function normally during the roll-over. But in fact, their intelligence system had already been disabled.) Such a situation has the potential for catastrophe. If America cannot observe what the Russians are doing with their nuclear weapons-or vice versa-especially during a serious international crisis they are likely to err on the side of "caution," which could mean that something as benign as the launch of a weather satellite could actually trigger annihilation of the planet. This situation became even more significant after the September 11 attack.

### A2: No Nuke War

#### Nuclear war more likely now than ever.

**Zaitchik 4** (Alexander, Co-founded Freezerbox in 1998, Reported from more than a dozen countries for publications such as the International Herald Tribune, Bulletin of Atomic Scientists, Wired, the San Francisco Chronicle, The Believer, and many others, *Hair-Trigger Planet*, http://www.freezerbox.com/archive/article.php?id=285)

When the U.S.S.R. collapsed, American public interest in nuclear weapons disappeared under the rubble. People boxed up their fears and hauled them down to the basements of their souls like some hideous secret, never to be looked upon again. Thirteen years later, we're still willful strangers to thermonuclear dread, carrying on as if the nuclear stockpiles amassed during the Cold War had all been converted into solar panels and parakeet swings under Boris Yeltsin's kindly gaze. Of course, they weren't. Most of those warheads are still live, still scattered under prairies, under seas, on roving flatbed trucks, ready to launch at a moment's notice. Right now, thousands of them are aimed at you, your family and your favorite television and sports personalities. Against a backdrop of nuclear proliferation, both Russia and the U.S. continue to maintain and refine their own arsenals. They are also lowering the thresholds for their use. As Washington pushes forward with missile defense and a bonus round of NATO expansion, Russian generals are bristling, while Russia's command and control system continues to deteriorate, increasing the chance that misjudgment, error or sabotage could trigger a missile launch against, say, New York City, which is still targeted for a couple hundred megatons. According to those analysts who never took their eyes off the nuclear threat, the danger of a missile exchange between U.S. and Russia is actually **greater today** than during the more stable periods of the Cold War. Last week, Russia held a wide-ranging exercise simulating a nuclear war with America. Old Soviet Tu-160 strategic bombers launched cruise missiles over the North Atlantic and ICBMs were tested over Russia's far northern region. Military satellites were launched under simulation battlefield conditions, and Russia's beleaguered early warning system was put through the ringer. Gen. Yuri Baluyevsky, first deputy chief of the General Staff of the Russian military, told reporters in Moscow that the military exercise reflected Russian concerns over U.S. plans to research and develop new classes of nuclear weapons, including so-called "bunker busters." "The [U.S. is] trying to make nuclear weapons an instrument of solving military tasks [and] lower the threshold of nuclear weapons use," Baluyevsky said. "Shouldn't we react to that?" Days before the exercise, Russian defense minister Sergei Ivanov had a testy exchange with Senator John McCain at NATO's annual security conference in Munich. The two clashed over Moscow's "meddling" in the Baltics, Ukraine and the Caucuses. McCain charged neo-imperialism; Ivanov reiterated Russia's right to secure its "near abroad." It is an argument that is just getting started. As the two nuclear superpowers vie for influence and oil routes, U.S.-Russian tensions will rise. In a sign of the changing times, nostalgic Cold Warrior William Safire blurted out in his Feb. 9 syndicated column something that has rarely been said in polite company since 1989: that the central mission of NATO is still to "contain the Russian bear." The clash at the Munich conference was certainly a chilling moment for those unenthusiastic about another Cold War. But it was far from the first such moment since the dismantling of the Berlin Wall. In fact, the entire post-Cold War period could be accurately described as one long series of huge, underreported chilling moments, during which the threat of nuclear war has persisted and grown amid public apathy and ignorance. Call it the dirty little open secret of nuclear planning: Neither Russia nor the U.S. ever stopped viewing preparation for war against the other as the central organizing principle of its nuclear policy. February's extensive war game wasn't Russia's first such drill since the end of the Cold War, and the U.S. military performs similar drills annually. Driving the Russian side of U.S.-Russian nuclear politics is the General Staff. The Russian General Staff is made up of officers from the various branches of the military, including the Strategic Rocket Forces. It is the generator and keeper of Russian nuclear policy. These senior generals, who maintain de facto independent control over the country's nuclear weapons, are proud, tough bastards who came of age during the heyday of Soviet military prestige. It is said that Gorbachev just barely prevented some of them from launching an invasion of Eastern Europe to prevent the collapse of the Warsaw Pact. Even now, many remain deeply bitter about the dissolution of the U.S.S.R., which deprived Russia of the eastern buffer it acquired in World War II, when the Red Army beat back and crushed the Nazi Wehrmacht at the cost of 20 million lives. The memory of Hitler's June 1941 invasion lives deep in the General Staff's collective military mind, fueling a determination that Russia will never again be taken by surprise. This determination is today reinforced by Russian weakness and what these generals perceive as the growing NATO "threat." Faced with economic ruin and the collapse of the conventional military, they have concentrated attention and resources on the world's second-greatest deterrent: Russia's remaining massive nuclear arsenal. American military planners are naturally unnerved by the continued existence of this arsenal, and lingering **mutual suspicions** have led both sides to maintain their nuclear forces on a **constant alert**, launch-on-warning footing. This means that American and Russian rocket-mounted nuclear weapons remain armed, fueled, loaded and kept at hair-trigger readiness 24 hours a day, 365 days a year.

# Octas vs. Michigan DH (IFR’s)

## 1NC

### 1NC

#### Immigration reform will pass, but capital’s key

NYT 1/31

[New York Times, 1/31/12, http://www.nytimes.com/2013/02/01/us/politics/senators-look-at-07-failure-for-lessons-on-immigration.html?\_r=0]

As eight senators in a bipartisan group look ahead to a broad immigration overhaul, they are also looking back to 2006 and 2007 — the last time a major immigration measure was considered — as something of a reverse playbook. Lesson 1? “Make sure you get out there and define what you’re trying to do,” said former Senator Trent Lott, the Mississippi Republican who, in 2007, was the minority whip when his chamber’s immigration efforts imploded. “Don’t forget to pay attention to the message, and don’t let the media define what you’re trying to do.” It is a tip that Mr. Lott says he has communicated to the staff of Senator Marco Rubio, a Florida Republican involved in the current effort, and so far Mr. Rubio seems to be heeding the advice. In recent weeks, he has focused on conservative media powerhouses, tirelessly wooing influential voices on the right like Bill O’Reilly and Rush Limbaugh. “The outreach by Marco Rubio has been very positive,” Mr. Lott said. “He’s very good at explaining what he wants to do.” Getting out ahead by articulating their immigration principles, as the group did in a Monday news conference, is only one of the ways the senators hope to learn from the mistakes of the past. This time, they said, they are capitalizing on a promising political environment, using more conciliatory language, and trying to harness media outlets to their advantage. They also plan to move their legislation through the Judiciary Committee, a step not taken in 2007 and one that helped doom the bill, and are working more closely **with businesses and labor unions** to make sure the two can also reach a compromise. “Our timing is right,” said Richard J. Durbin of Illinois, the No. 2 Democrat in the Senate. “The election results are still fresh in the minds of my Republican colleagues and they don’t want to go through this again.” President George W. Bush said in 2009 that it was “a mistake” to have pushed for changes to Social Security, rather than immigration, immediately after the 2004 election. By the time he took on immigration late in his second term, he was a lame duck president, weakened by the war in Iraq and facing dissent within his party. “By his own admission, President Bush made a strategic error in not pushing the issue right after his re-election,” said Kevin Appleby, the director of migration policy at the United States Conference of Catholic Bishops. “President Obama is not making the same mistake. He still has a lot of political capital to spend.” In the wake of the 2012 presidential election, where Mr. Obama’s defeat of Mitt Romney came with the help of 71 percent of the Hispanic vote, **those on all sides** of the immigration effort believe the climate is ripe for another attempt. And, at least in the early stages, they are taking steps to reach across the aisle, even with the words they choose. “The most important lesson I took way from 2006 and 2007 is that people had no faith that there wouldn’t be future waves of illegal immigrants,” said Senator Charles E. Schumer, a Democrat of New York in the Senate’s bipartisan immigration group. To show that he is serious about an overhaul, he explained, he is especially conscious of the language he uses; Mr. Schumer now refers to “illegal immigrants,” a term preferred by the right and an acknowledgment that the 11 million illegal immigrants currently in the country did, in fact, break the law. In a similar linguistic concession, Mr. Rubio, during Monday’s immigration news conference, referred to the “undocumented” workers, a term generally preferred by Democrats and loathed by his party’s conservative wing. In 2007, in an attempt to save time and reach a deal, the Senate bypassed the Judiciary Committee and brought the legislation straight to the floor. At the time, the senators who drafted the bill tried to band together to vote down any amendments that changed the substance of their compromise, an agreement that broke down. Several controversial amendments, including one that then-Senator Obama supported, ultimately led to the bill’s collapse. “What we’re doing now is we’re going to put it through committee,” Mr. Schumer said. “When the bill gets through committee, it will be battle-tested and we will be prepared for the floor in a better way.” The group is also considering again trying to maintain **a large voting bloc**, to squash any amendments they believe could kill their bill. “I think we have to unless there’s something that we both agree to,” Senator John McCain, Republican of Arizona, said when asked about such a possibility at an immigration panel on Wednesday. “It’s going to be fragile, as these kinds of things are, and so we will have to take some tough votes in order to keep it intact.”

#### Plan unpopular

Korte, 12 (Gregory, “Politics stands in the way of nuclear plant's future”, USA Today, April 27, http://www.usatoday.com/money/industries/energy/story/2012-04-13/usec-centrifuges-loan-guarantees/54560118/1)

Three dozen 43-foot-tall centrifuges swirl quietly in a cavernous building in southern Ohio, ready to turn uranium hexafluoride into the enriched fuel that can power America's nuclear power plants. They stand like stacks of poker chips on a table — the ante for what could be a $2 billion national gamble on nuclear energy. Energy company USEC wants federal loan guarantees to allow it to build 11,000 centrifuges here, which would spin out enough fuel to power about three dozen nuclear power plants non-stop. But while plenty of politicians whose districts could benefit from the project support it, the Piketon plant remains stymied by a political standoff. Many Republicans who back the project — called the American Centrifuge Project — have savaged the Obama administration loan program that would pay for it, while the Obama Energy Department, burned by Republican criticism, has voiced tentative support for the plan but won't authorize federal money for it without congressional approval. For almost a year, congressional Republicans have criticized the administration's $535 million loan guarantee to now-bankrupt solar panel maker Solyndra. The administration, they say, is unfairly picking "winners and losers" in energy. Both sides say they want the project to move forward. Both support short-term "bridge" funding to keep the project going until the financing can be worked out. Both say the other side has to make the first move. **The stakes are high:** It's an election year, and Ohio is a swing state. USEC estimates the project at its peak will generate 3,158 jobs in Ohio, and 4,284 elsewhere. Pike County, home to the centrifuges, has a 13% unemployment rate — the highest in Ohio. The median household income is about $40,000. The average job at USEC pays $77,316.

#### Immigration reform expands skilled labor --- spurs relations and economic growth in China and India.

Los Angeles **Times**, 11/9/**2012** (Other countries eagerly await U.S. immigration reform, p. http://latimesblogs.latimes.com/world\_now/2012/11/us-immigration-reform-eagerly-awaited-by-source-countries.html)

"Comprehensive immigration reform will see expansion of skilled labor visas," predicted B. Lindsay Lowell, director of policy studies for the Institute for the Study of International Migration at Georgetown University. A former research chief for the congressionally appointed Commission on Immigration Reform, Lowell said he expects to see at least a fivefold increase in the number of highly skilled labor visas that would provide "a significant shot in the arm for India and China." There is widespread consensus among economists and academics that skilled migration fosters new trade and business relationships between countries and enhances links to the global economy, Lowell said. "Countries like India and China weigh the opportunities of business abroad from their expats with the possibility of brain drain, and I think they still see the immigration opportunity as a bigger plus than not," he said.

#### US/India relations averts South Asian nuclear war.

**Schaffer**, Spring **2002** (Teresita – Director of the South Asia Program at the Center for Strategic and International Security, Washington Quarterly, p. Lexis)

Washington's increased interest in India since the late 1990s reflects India's economic expansion and position as Asia's newest rising power. New Delhi, for its part, is adjusting to the end of the Cold War. As a result, both giant democracies see that they can benefit by closer cooperation. For Washington, the advantages include a wider network of friends in Asia at a time when the region is changing rapidly, as well as a stronger position from which to help calm possible future nuclear tensions in the region. Enhanced trade and investment benefit both countries and are a prerequisite for improved U.S. relations with India. For India, the country's ambition to assume a stronger leadership role in the world and to maintain an economy that lifts its people out of poverty depends critically on good relations with the United States.

### 1NC

#### Energy security militarizes energy – justifies intervention and causes serial policy failure

Ciuta 10 -- Lecturer in International Relations and Director of the Centre of European Politics, School of Slavonic and East European Studies @ University College London, UK (Felix, 2010, "Conceptual Notes on Energy Security: Total or Banal Security?" Security Dialogue 41(123), Sage)

Even casual observers will be familiar with the argument that energy is a security issue because it is either a cause or an instrument of war or conflict. Two different strands converge in this logic of energy security. The first strand focuses on energy as an instrument: energy is what states fight their current wars with. We can find here arguments regarding the use of the ‘energy weapon’ by supplier states (Belkin, 2007: 4; Lugar, 2006: 3; Winstone, Bolton & Gore, 2007: 1; Yergin, 2006a: 75); direct substitutions in which energy is viewed as the ‘equivalent of nuclear weapons’ (Morse & Richard, 2002: 2); and rhetorical associations that establish policy associations, as exemplified by the panel ‘Guns and Gas’ during the Transatlantic Conference of the Bucharest NATO Summit. The second strand comes from the literature on resource wars, defined as ‘hot conflicts triggered by a struggle to grab valuable resources’ (Victor, 2007: 1). Energy is seen as a primary cause of greatpower conflicts over scarce energy resources (Hamon & Dupuy, 2008; Klare, 2001, 2008). Alternatively, energy is seen as a secondary cause of conflict; here, research has focused on the dynamics through which resource scarcity in general and energy scarcity in particular generate socio-economic, political and environmental conditions such as population movements, internal strife, secessionism and desertification, which cause or accelerate both interstate and intrastate conflict (Homer-Dixon, 1991, 1994, 2008; Solana, 2008; see also Dalby, 2004). As is immediately apparent, this logic draws on a classic formulation that states that ‘a nation is secure to the extent to which it is not in danger of having to sacrifice core values, if it wishes to avoid war, and is able . . . to maintain them by victory in such a war’ (Lippmann, 1943: 51). The underlying principle of this security logic is survival: not only surviving war, but also a generalized quasi-Darwinian logic of survival that produces wars over energy that are fought with ‘energy weapons’. At work in this framing of the energy domain is therefore a definition of security as ‘the absence of threat to acquired values’ (Wolfers, 1952: 485), more recently reformulated as ‘survival in the face of existential threats’ (Buzan, Wæver & de Wilde, 1998: 27). The defining parameters of this traditional security logic are therefore: (1) an understanding of security focused on the use of force, war and conflict (Walt, 1991: 212; Freedman, 1998: 48); and (2) a focus on states as the subjects and objects of energy security. In the war logic, energy security is derivative of patterns of international politics – often captured under the label ‘geopolitics’ (Aalto & Westphal, 2007: 3) – that lend their supposedly perennial attributes to the domain of energy (Barnes, Jaffe & Morse, 2004; Jaffe & Manning, 1998). The struggle for energy is thus subsumed under the ‘normal’ competition for power, survival, land, valuable materials or markets (Leverett & Noël, 2007). A key effect of this logic is to ‘arrest’ issues usually not associated with war, and thus erase their distinctive characteristics. Even the significance of energy qua energy is abolished by the implacable grammar of conflict: energy becomes a resource like any other, which matters insofar as it affects the distribution of capabilities in the international system. As a result, a series of transpositions affect most of the issues ranked high on the energy security agenda. For example, in the European context, the problem is not necessarily energy (or, more precisely, gas, to avoid the typical reduction performed by such accounts). The problem lies in the ‘geopolitical interests’ of Russia and other supplier states, whose strength becomes inherently threatening (Burrows & Treverton, 2007; Horsley, 2006). Energy security policies become entirely euphemistic, as illustrated for example by statements that equate ‘avoiding energy isolation’ with ‘beating Russia’ (Baran, 2007). Such ‘geopolitical’ understanding of international politics also habituates a distinct vocabulary. Public documents, media reports and academic analyses of energy security are suffused with references to weapons, battles, attack, fear, ransom, blackmail, dominance, superpowers, victims and losers. It is therefore unsurprising that this logic is coterminous with the widely circulating narrative of the ‘new’ Cold War. This lexicon of conflict encourages modulations, reductions and transpositions in the meanings of both energy and security. This is evident at the most fundamental level, structuring encyclopaedic entries (Kohl, 2004) and key policy documents (White House, 2007), where energy security becomes oil security (security modulates energy into oil), which becomes oil geopolitics (oil modulates security into geopolitics). Once security is understood in the grammar of conflict, the complexity of energy is abolished and reduced to the possession of oilfields or gas pipelines. The effect of this modulation is to habituate the war logic of security, and also to create a hierarchy between the three constitutive dimensions of energy security (growth, sustenance and the environment). This hierarchy reflects and at the same time embeds the dominant effect of the war logic, which is the militarization of energy (Russell & Moran, 2008), an argument reminiscent of the debates surrounding the securitization of the environment (Deudney, 1990). It is of course debatable whether this is a new phenomenon. Talk of oil wars has been the subject of prestigious conferences and conspiracy theories alike, and makes the headlines of newspapers around the world. A significant literature has long focused on the relationship between US foreign policy, oil and war (Stokes, 2007; in contrast, see Nye, 1982). The pertinence of this argument cannot be evaluated in this short space, but it is worth noting that it too reduces energy to oil, and in/security to war. The key point is that this logic changes not only the vocabulary of energy security but also its political rationality. As Victor (2008: 9) puts it, this signals ‘the arrival of military planning to the problem of natural resources’ and inspires ‘a logic of hardening, securing and protecting’ in the entire domain of energy. There is, it must be underlined, some resistance to the pull of the logic of war, as attested for example by NATO’s insistence that its focus on energy security ‘will not trigger a classical military response’ (De Hoop Scheffer, 2008: 2). Yet, the same NATO official claims that ‘the global competition for energy and natural resources will re-define the relationship between security and economics’, which hints not only at the potential militarization of energy security policy but also at the hierarchies this will inevitably create. New geographies of insecurity will thus emerge if the relationship between the environment, sustenance and growth is structured by the militarized pursuit of energy (Campbell, 2005: 952; Christophe Paillard in Luft & Paillard, 2007).

**Enframing of national security is a pre-requisite to macropolitical violence**

**Burke 7** (Anthony, Senior Lecturer in Politics and International Relations at UNSW, Sydney, “Ontologies of War: Violence, Existence and Reason”, Theory and Event, 10.2, Muse)

My argument here, whilst normatively sympathetic to Kant's moral demand for the eventual abolition of war, militates against excessive optimism.86 Even as I am arguing that war is not an enduring historical or anthropological feature, or a neutral and rational instrument of policy -- that it is rather the **product of hegemonic forms of knowledge** about political action and community -- my analysis does suggest some sobering conclusions about its power as an idea and formation. Neither the progressive flow of history nor the pacific tendencies of an international society of republican states will save us. The violent ontologies I have described here in fact dominate the conceptual and policy frameworks of modern republican states and have come, against everything Kant hoped for, to stand in for progress, modernity and reason. Indeed what Heidegger argues, I think with some credibility, is that the enframing world view has come to stand in for being itself. Enframing, argues Heidegger, 'does not simply endanger man in his relationship to himself and to everything that is...it drives out every other possibility of revealing...the rule of Enframing threatens man with the possibility that it could be denied to him to enter into a more original revealing and hence to experience the call of a more primal truth.'87 What I take from Heidegger's argument -- one that I have sought to extend by analysing the militaristic power of modern ontologies of political existence and security -- is a view that the challenge is posed not merely by a few varieties of weapon, government, technology or policy, but by an overarching system of thinking and understanding that lays claim to our entire space of truth and existence. Many of the **most destructive features of contemporary modernity** -- militarism, repression, coercive diplomacy, covert intervention, geopolitics, economic exploitation and ecological destruction -- derive not merely from particular choices by policymakers based on their particular interests, but from calculative, 'empirical' discourses of scientific and political truth rooted in powerful enlightenment images of being. Confined within such an epistemological and cultural universe, **policymakers' choices become necessities**, their actions become inevitabilities, and humans suffer and die. Viewed in this light, 'rationality' is the name we give the chain of reasoning which builds one structure of truth on another until a course of action, however violent or dangerous, becomes preordained through that reasoning's very operation and existence. It creates both discursive constraints -- available choices may simply not be seen as credible or legitimate -- and material constraints that derive from the mutually reinforcing cascade of discourses and events which then preordain militarism and violence as necessary policy responses, however ineffective, dysfunctional or chaotic. The force of my own and Heidegger's analysis does, admittedly, tend towards a deterministic fatalism. On my part this is quite deliberate; it is important to allow this possible conclusion to weigh on us. Large sections of modern societies -- especially parts of the media, political leaderships and national security institutions -- are utterly trapped within the Clausewitzian paradigm, within the instrumental utilitarianism of 'enframing' and the stark ontology of the friend and enemy. They are certainly tremendously aggressive and energetic in continually stating and reinstating its force. But is there a way out? Is there no possibility of agency and choice? Is this not the key normative problem I raised at the outset, of how the modern ontologies of war efface agency, causality and responsibility from decision making; the responsibility that comes with having choices and making decisions, with exercising power? (In this I am much closer to Connolly than Foucault, in Connolly's insistence that, even in the face of the anonymous power of discourse to produce and limit subjects, selves remain capable of agency and thus incur responsibilities.88) There seems no point in following Heidegger in seeking a more 'primal truth' of being -- that is to reinstate ontology and obscure its worldly manifestations and consequences from critique. However we can, while refusing Heidegger's unworldly89 nostalgia, appreciate that he was searching for a way out of the modern system of calculation; that he was searching for a 'questioning', 'free relationship' to technology that would not be immediately recaptured by the strategic, calculating vision of enframing. Yet his path out is somewhat chimerical -- his faith in 'art' and the older Greek attitudes of 'responsibility and indebtedness' offer us valuable clues to the kind of sensibility needed, but little more. When we consider the problem of policy, the force of this analysis suggests that choice and agency can be all too often limited; they can remain confined (sometimes quite wilfully) within the overarching strategic and security paradigms. Or, more hopefully, policy choices could aim to bring into being a more enduringly inclusive, cosmopolitan and peaceful logic of the political. But this cannot be done without seizing alternatives from outside the space of enframing and utilitarian strategic thought, by being aware of its presence and weight and activating a very different concept of existence, security and action.90 This would seem to hinge upon 'questioning' as such -- on the questions we put to the real and our efforts to create and act into it. Do security and strategic policies seek to exploit and direct humans as material, as energy, or do they seek to protect and enlarge human dignity and autonomy? Do they seek to impose by force an unjust status quo (as in Palestine), or to remove one injustice only to replace it with others (the U.S. in Iraq or Afghanistan), or do so at an unacceptable human, economic, and environmental price? Do we see our actions within an instrumental, amoral framework (of 'interests') and a linear chain of causes and effects (the idea of force), or do we see them as folding into a complex interplay of languages, norms, events and consequences which are less predictable and controllable?91 And most fundamentally: Are we seeking to coerce or persuade? Are less violent and more sustainable choices available? Will our actions perpetuate or help to end the global rule of insecurity and violence? Will our thought?

**Altenative – reject the affirmative’s security discourse – only resistance can generate genuine political thought**

**Neoclous 8 –** Mark Neocleous, Prof. of Government @ Brunel, 2008 [Critique of Security, 185-6]

The only way out of such a dilemma, to escape the fetish, is perhaps **to eschew the logic of security altogether** - to reject it as so ideologically loaded in favour of the state that any real political thought other than the authoritarian and reactionary should be pressed to give it up. That is clearly something that can not be achieved within the limits of bourgeois thought and thus could never even begin to be imagined by the security intellectual. It is also something that the constant iteration of the refrain 'this is an insecure world' and reiteration of one fear, anxiety and insecurity after another will also make it hard to do. But it is something that the critique of security suggests we may have to consider if we want a political way out of the impasse of security. This impasse exists because security has now become so all-encompassing that it **marginalises all else, most notably** the constructive conflicts, **debates** and discussions **that animate political life.** The constant prioritising of a mythical security as a political end - as the political end constitutes a rejection of politics in any meaningful sense of the term. That is, as a mode of action in which differences can be articulated, in which the conflicts and struggles that arise from such differences can be fought for and negotiated, in which people might come to believe that another world is possible - that they might transform the world and in turn be transformed. Security politics simply removes this; worse, it remoeves it while purportedly addressing it. In so doing it suppresses all issues of power and turns political questions into debates about the most efficient way to achieve 'security', despite the fact that we are never quite told - never could be told - what might count as having achieved it. Security politics is, in this sense, an anti-politics,"' dominating political discourse in much the same manner as the security state tries to dominate human beings, reinforcing security fetishism and the monopolistic character of security on the political imagination. We therefore need to get beyond security politics, not add yet more 'sectors' to it in a way that simply expands the scope of the state and legitimises state intervention in yet more and more areas of our lives. Simon Dalby reports a personal communication with Michael Williams, co-editor of the important text Critical Security Studies, in which the latter asks: if you take away security, what do you put in the hole that's left behind? But I'm inclined to agree with Dalby: **maybe there is no hole**."' The mistake has been to think that there is a hole and that this hole needs to be filled with a new vision or revision of security in which it is re-mapped or civilised or gendered or humanised or expanded or whatever. All of these ultimately remain within the statist political imaginary, and consequently end up reaffirming the state as the terrain of modern politics, the grounds of security. The real task is not to fill the supposed hole with yet another vision of security, but to fight for an **alternative political language** which takes us beyond the narrow horizon of bourgeois security and which therefore does not constantly throw us into the arms of the state. That's the point of critical politics: to develop a new political language more adequate to the kind of society we want. Thus while much of what I have said here has been of a negative order, part of the tradition of critical theory is that the negative may be as significant as the positive in setting thought on new paths. For if security really is the supreme concept of bourgeois society and the fundamental thematic of liberalism, then to keep harping on about insecurity and to keep demanding 'more security' (while meekly hoping that this increased security doesn't damage our liberty) is to **blind ourselves** to the possibility of building real alternatives to the authoritarian tendencies in contemporary politics. To situate ourselves against security politics would allow us to circumvent the debilitating effect achieved through the constant securitising of social and political issues, debilitating in the sense that 'security' helps consolidate the power of the existing forms of social domination and justifies the short-circuiting of even the most democratic forms. It would also allow us to forge another kind of politics centred on a **different conception of the good.** We need a new way of thinking and talking about social being and politics that moves us beyond security. This would perhaps be emancipatory in the true sense of the word. What this might mean, precisely, must be open to debate. But it certainly requires recognising that security is an illusion that has forgotten it is an illusion; it requires recognising that security is not the same as solidarity; it requires accepting that insecurity is part of the human condition, and thus giving up the search for the certainty of security and instead learning to tolerate the uncertainties, ambiguities and 'insecurities' that come with being human; it requires accepting that 'securitizing' an issue does not mean dealing with it politically, but **bracketing it out** and handing it to the state; **it requires us to be brave enough to return the gift."'**

### 1NC

#### DOE will block natural gas exports – but demand shifts can change this

Ebinger et al 12 (Charles, Senior Fellow and Director of the Energy Security Initiative – Brookings, Kevin Massy, Assistant Director of the Energy Security Initiative – Brookings, and Govinda Avasarala, Senior Research Assistant in the Energy Security Initiative – Brookings, “Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas,” Brookings Institution, Policy Brief 12-01, http://www.brookings.edu/~/media/research/files/reports/2012/5/02%20lng%20exports%20ebinger/0502\_lng\_exports\_ebinger.pdf)

From the perspective of the U.S. federal government, the issue of implications is viewed in terms of “public interest.” Under existing legislation, exports of natural gas to countries with a free trade agreement (FTA) with the United States are, by law, deemed to be in the public interest and authorization is required to be given without modification or delay. Projects looking for authorization to export LNG to countries without an FTA, which account for roughly 96 percent of current global LNG demand, are required to be approved by the Secretary of Energy unless, after public hearing, the Department of Energy finds that such exports are not in the public interest. 80 Although the legal definition of “public interest” is not explicitly given in existing legislation, according to public statements by officials from the Department of Energy, “public interest” includes:

• Adequate domestic natural gas supply;

• Domestic demand for natural gas proposed for export; Economic impacts of exports (on GDP, consumers, and industry); • U.S. energy security; • Job creation; • U.S. balance of trade; • International considerations; • Environmental considerations; • Consistency with DoE’s policy of promoting market competition through free negotiation of trade 81 The first two of these criteria were addressed in Part I. The remainder focus on the various domestic and international implications of U.S. LNG exports. domestic implications The domestic implications of U.S. LNG exports include their impact on natural gas prices, natural gas price volatility, jobs and competitiveness, and on overall energy security. Price of domestic natural Gas The domestic price impact of natural gas exports will be a significant factor in determining whether or not the United States should export LNG. While it is generally acknowledged that a domestic price increase will result from largescale LNG exports, the size of the price increase is the subject of debate, with a number of studies suggesting a range of possible outcomes. The important considerations when analyzing the results and conclusions of the various existing studies are the assumptions and models that are used when making price forecasts. Below are the results and methodologies of five major pricing studies done by the EIA and three consultancies: Deloitte, ICF International, and Navigant Consulting, which published two studies. 2012 Energy information Administration study In January 2012, the EIA published a study entitled “Effect of Increased Natural Gas Exports on Domestic Energy Markets.” 82 The study, conducted at the request of the Office of Fossil Energy of the Department of Energy, analyzed four different export scenarios across four different resource base or economic assumptions to project price responses to LNG exports. In addition to a “baseline” scenario, where no LNG is exported, the EIA model considered four different export scenarios: • A low export/slow growth scenario, where 6 bcf/day of LNG is exported, phased in at a rate of 1 bcf/day per year; • A low export/rapid growth scenario, where 6 bcf/day of LNG is exported, phased in at a rate of 3 bcf/day per year; • A high export/slow growth scenario, where 12 bcf/day of LNG is exported, phased in at a rate of 1 bcf/day per year; • A high export/rapid growth scenario, where 12 bcf/day of LNG is exported, phased in at a rate of 3 bcf/day per year Given the uncertainty over the actual size of the shale gas resource base and the future growth of the U.S. economy, each of these scenarios (both “baseline” and export) were applied to four alternate background cases: • A reference case, based on the EIA’s 2011 Annual Energy Outlook; • A low-shale estimated ultimate recovery (EUR) case, in which shale gas production from new, undrilled wells is 50 percent below the reference case scenario; • A high-shale EUR case, in which shale gas production from new, undrilled wells is 50 percent higher than the reference case; • A high economic growth case, in which U.S. GDP grows at 3.2 percent as opposed to the 2.7 percent assumed in the reference case. Given the range of assumptions, the range of results was unsurprisingly wide. The results range from a 9.6 percent increase (from $3.56 to $3.90/ mcf) in domestic natural gas prices in 2025 due to exports (in the case of high shale gas recovery, low export volumes and a slow rate of export growth) to a 32.5 percent increase (in the case of low shale gas recovery, high export volumes and a high rate of export growth). The percentage premium for domestic natural gas prices in 2025 for each scenario relative to the baseline scenario price estimate is detailed in table 3. In addition to the price premium for exporting natural gas that exists in each case, the EIA study projected a short-term spike in natural gas prices as a result of LNG exports. As figure 7 below illustrates, in 2015, the first year that LNG exports occur, domestic natural gas prices rise rapidly until total export capacity is reached. In the “lowrapid” scenario prices peak in 2016, after the 6 bcf/day of export capacity is built over 2 years; in the “high-slow” scenario, natural gas prices peak in 2026, after the 12 bcf/day of export capacity is built over 12 years. The immediate jump in price becomes more pronounced in the scenarios where LNG export capacity increases quickly. In the “low-rapid” scenario, the price of natural gas peaks at nearly 18 percent above the baseline case; in the “high-rapid” scenario, natural gas prices peak at 36 percent above the baseline case. This price impact is exacerbated in the Low Shale EUR and High Macroeconomic Growth cases, as LNG exports further tighten domestic natural gas markets. In the most extreme example, the high-rapid scenario for exports in a Low Shale EUR case, the price for natural gas peaks at more than 50 percent than the baseline case. 83 There are two factors that should be considered when interpreting the results of this price impact study. The first is the assumption regarding the rate at which LNG could be exported. The results of EIA’s analysis represent an extreme scenario for LNG exports. In the existing LNG market, it is particularly unlikely that either the “low-rapid” or the “high-rapid” scenarios would materialize. The former assumption stipulates that the United States would export 6 bcf/day of LNG by 2016. Given that, at the time of writing, only one facility has been approved to export 2.2 bcf/day to nonFTA countries starting in 2015, it is unlikely that another three plants would be approved and built in such a short time frame. 84 The latter scenario, that the United States would be exporting 12 bcf/ day of LNG by 2018, suggests that in the next several years, the United States would grow from exporting negligible volumes of LNG to having roughly one-third of the global LNG export capacity. Not only would this supply growth outpace growth in global LNG demand, but this capacity addition would also have to compete with roughly 11 bcf/day of Australian-origin LNG that is expected to hit the market around the same time. 85 The second issue is the model’s assumptions for incremental investment in natural gas production as a result of increased export capacity. The spike in price depicted in figure 7 occurs because investment from gas producers lags additional demand. In the model, producers respond to, rather than anticipate, additional demand. For this reason, prices peak once the export capacity is filled, before steadily decreasing. In reality, the expectation of future demand would likely induce gas producers to invest in additional production before incremental demand occurs. As a result, the increase in prices would likely begin earlier and peak at a lower level than suggested by the model. deloitte study An earlier study released in November 2011 from the Deloitte Center for Energy Solutions highlighted the producer-response in its model. In addition to finding that LNG exports would produce a smaller increase in gas prices than the EIA report suggests, the Deloitte study points out that “producers can develop more reserves in anticipation of demand growth, such as LNG exports. There will be ample notice and time in advance of the exports to make supplies available.” 86 Using a dynamic model, in which production increased in anticipation of new demand, the Deloitte study found that 6 bcf/day of exports of LNG would result in, on average, a 1.7 percent increase (from $7.09 to $7.21/MMBtu) in the price of natural gas between 2016 and 2035. Further, the Deloitte study noted that there would be regional variations to the increase in natural gas prices resulting from LNG exports. As most of the proposed liquefaction terminals are expected to be on the Gulf Coast, the price of Henry Hub gas, which is the key benchmark for natural gas from the Gulf Coast, will increase by $0.22/ MMBtu by 2035 as a result of U.S. LNG exports. This is more than double the price increase projected in regions further away from the LNG export terminals. In New York and Illinois, natural gas prices are projected to increase by less than $0.10/MMBtu. This is particularly important in the Northeast, which historically experiences some of the highest natural gas prices in the country, but will benefit from the development and consumption of natural gas from the nearby Marcellus shale play. other studies Three other studies of note have analyzed the price impacts of U.S. LNG exports. In August 2010, Navigant Consulting found that 2 bcf/day of LNG exports would cause a price increase of between 7 and 7.9 percent from 2015 to 2035 relative to a scenario with no gas exports. ICF International found in August 2011 that 6 bcf/day of exports would result in an 11 percent ($0.64/MMBtu) increase in natural gas prices over the same period. 87 More recently, Navigant released another study that analyzed the impact of two separate export scenarios. The first scenario modeled the impact of 3.6 bcf/day of LNG exports from three terminals in North America: Sabine Pass in Louisiana, Kitimat in British Columbia, and Coos Bay in Oregon. The second scenario modeled the impact of 6.6 bcf/day of LNG exports from the three aforementioned export projects and 2 bcf/day of added exports from the Gulf Coast and 1 bcf/day from Maryland. 88 This Navigant study found that 6.6 bcf/day of LNG exports would result in a 6 percent ($0.35/MMBtu) increase in natural gas prices from 2015 to 2035. As with the EIA and Deloitte studies, the results of both Navigant and ICF’s studies must be analyzed in the context of their respective methodologies and assumptions. Navigant’s first study uses a more static supply model, which, unlike dynamic supply models, does not fully take account of the effect that higher prices have on spurring additional production. As a result, it takes a conservative estimate of supply growth potential. The report acknowledges that the price outcomes modeled in its analysis “establish the upper range of impacts that exports […] might have on natural gas prices.” 89 This study also did not factor in the reemergence of the industrial sector as a major consumer of natural gas following the shale gas “revolution.” The study assumes that natural gas consumption by the industrial sector will decline by 0.3% per year to 2035. By contrast, the EIA model assumes that industrial sector demand will increase by roughly 1% per year over the same period. 90 The ICF study factors in various levels of production response from an increase in price. Under its 6 bcf/day export scenario, the price impact ranges from a $0.52/ MMBtu increase in a more responsive drilling activity scenario to a $0.75/MMBtu increase in a less responsive drilling activity scenario. which study is right? Given that these studies forecast natural gas prices two decades into the future, it is difficult to determine which study is most accurate. (table 4 shows a comparison of the price impact forecasts of the various models.) However, policymakers would benefit from having a better understanding of the results that are generated from each report. This includes choosing the most relevant results from each report. For instance, following the release of the EIA study, many commentators were quick to highlight that natural gas prices could increase by more than 50 percent as a result of LNG exports. However, this ignored the assumptions behind this number: it was based on the price of natural gas in one year under the most extreme assumptions of exports and domestic resource base. A more comprehensive analysis should include an assessment of the average price impact from 2015 to 2035. When distinguishing between the various studies, policymakers should identify which assumptions most resemble the existing natural gas market and its likely direction, and which models are most reflective of the complex nature of domestic and global natural gas trade. Assuming realistic volumes of natural gas exports as well as a reasonable supply response by natural gas producers are important considerations. It is important to note that the supply curves in the various studies reflect different interpretations of the economics of marginal production. The Power sector and industrial sector Part I indicated that the power-generation and industrial sectors would account for most of the demand for newly available natural gas resources. As shown above, LNG exports are likely to increase domestic prices of natural gas, suggesting negative consequences for these two competing sectors. In their analyses, both Deloitte and EIA found that the majority—63 percent, according to both studies—of the exported natural gas will come from new production as opposed to displaced consumption from other sectors. By contrast, between 17 and 38 percent of supply of natural gas for export would be met by reduced demand, as higher prices pushes some domestic consumers to use less gas. In the power generation and industrial sectors, the price impacts of LNG exports are likely to have modest impacts. In the power sector, natural gas has historically been used as a back up to coal and nuclear base-load generation. For such gas used at the margin, the increase in electricity prices as a result of LNG exports would be limited by its competitiveness relative to other fuels: as soon as it becomes more expensive than the alternative for back up generation, power producers will substitute away from gas. 91 According to ICF International, a $0.64/MMBtu increase in the price of natural gas would result in an electricity price increase of between $1.66 and $4.97/megawatt-hour (MWh), depending on how often gas is used as the marginal fuel for electricity. Deloitte estimates that the price increase of electricity would not be more than $1.65/MWh. 92 EIA estimates that electricity price impacts will be marginal as well (between $1.40/MWh and $2.90/MWh) except in the “highrapid” export scenario. 93 The EIA Annual Energy Outlook 2011 estimates that, without exporting LNG, the average price of electricity (across all fuels) in 2035 will be $92/MWh. 94 In the longer term, natural gas is itself likely to be used for more base-load generation. The rapid increase in shale gas production, coupled with the retirements of as much as 50 gigawatts (GW) of coal-fired electricity due to plant age or inability to adhere to possibly forthcoming EPA regulations is likely to increase the demand for natural gas in the power sector. According to some analysts, the near-term demand caused by the retirements of the oldest and least efficient coal-fired power plants could result in an additional natural gas demand of 2 bcf/day. 95 Given the lack of environmentally and economically viable alternatives, a moderate increase in gas prices is unlikely to result in a large move away from natural gas, although increased costs will be transferred to customers. Natural gas consumption in the power sector has been considered economic at prices much higher than those resulting from LNG exports in even the highest price-impact projections. Even prior to the shale gas “revolution,” when natural gas prices were high, natural gas demand was increasing in the power sector. The EIA Annual Energy Outlook 2005— published in a year when average well head prices were over $7/MMBTU—projected that natural gas demand in the electricity sector would increase by 70 percent between 2003 and 2015. 96 Unlike the power sector, which continued to build natural-gas fired generation during a period of increasing gas prices, the industrial sector was negatively affected by growing natural gas import dependence, high gas prices, and gas price volatility. Between 2000 and 2005, the price of natural gas increased by 99 percent and LNG imports more than doubled. 97 By 2005, the ratio of the price of oil to the price of natural gas was approximately 6:1, just below the 7:1 oil-to-gas price ratio at which U.S. petrochemical and plastics producers are globally competitive. 98 That same year Alan Greenspan, then-Chairman of the Federal Reserve, noted that because of natural gas price increases “the North American gas-using industry [was] in a weakened competitive position.” 99 Since then the price of natural gas has collapsed. In 2011, the oil-to-natural gas price ratio was more than 24:1. In 2012 it has been even higher. The decline in natural gas prices has galvanized the industrial sector. A joint study by PwC and the National Association for Manufacturers, an industry trade group, found that the development of shale gas could save manufacturers as much as $11.6 billion per year in feedstock costs through 2025. 100 New investments in petrochemical and plastics producing facilities are occurring throughout the East and Southeast, largely predicated on the availability of inexpensive natural gas. Opponents of LNG exports contend that such investments would be deterred in the future as a result of increases in the price of natural gas. However, the evidence suggests that the competitive advantage of U.S. industrial producers relative to its competitors in Western Europe and Asia is not likely to be affected significantly by the projected increase in natural gas prices resulting from LNG exports. As European and many Asian petrochemical producers use oil-based products such as naphtha and fuel oil as feedstock, U.S. companies are more likely to enjoy a significant cost advantage over their overseas competitors. Even a one-third decline in the estimated price of crude oil in 2035 would result in an oil-to-gas ratio of 14:1. 101 There is also the potential for increased exports to help industrial consumers. Ethane, a liquid byproduct of natural gas production at several U.S. gas plays, is the primary feedstock of ethylene, a petrochemical product used to create a wide variety of products. According to a study by the American Chemistry Council, an industry trade body, a 25 percent increase in ethane production would yield a $32.8 billion increase in U.S. chemical production. By providing another market for cheap dry gas, LNG exports will encourage additional production of natural gas liquids (NGL) that are produced in association with dry gas. According to the EIA, ethane production increased by nearly 30 percent between 2009 and 2011 as natural gas production from shale started to grow substantially. Ethane production is now at an alltime high, with more than one million barrels per day of ethane being produced. 102 Increased gas production for exports results in increased production of such natural gas liquids, in which case exports can be seen as providing a benefit to the petrochemical industry. natural gas price volatility A major concern among domestic end users of natural gas is the possibility of an increase in natural gas price volatility resulting from an increase in U.S. LNG exports. As figure 8 demonstrates, the price volatility experienced during the 2000s was the highest the domestic gas market has experienced in the past three decades. The volatility of the natural gas market in the 2000s was largely caused by a tight supply-demand balance. Natural gas demand increased substantially as the U.S. economy grew and natural gas was viewed as environmentally preferable to coal for power generation. This increase in demand coincided with a reduction in domestic supply and an increased reliance on imports. The recent surge in U.S. natural gas production has resulted in less market volatility since 2010. According to EIA, the standard deviation of the price of natural gas (a general statistical indicator of volatility) between 2010 and 2011 was one-third what it was during the 2000s. 103 Potential exports of U.S. LNG concerns some domestic consumers for two principal reasons: greater volatility in domestic natural gas prices; and exposure of domestic natural gas prices to higher international prices resulting in a convergence between low U.S. prices and high international prices. There is an insufficient amount of data and quantitative research on the relationship between do mestic natural gas price volatility and LNG exports. However, certain characteristics of the LNG market are likely to limit volatility. LNG is bound by technical constraints: it must be liquefied and then transported on dedicated tankers before arriving at terminals where a regasification facility must be installed. Liquefaction facilities have capacity limits to how much gas they can turn into LNG. If they are operating at or close-to full capacity, such facilities will have a relatively constant demand for natural gas, therefore an international price or supply shock would have little impact on domestic gas prices. Moreover, unlike oil trading, in which an exporter—theoretically—sells each marginal barrel of production to the highest bidder in the global market, the capacity limit on LNG production and export means that LNG exporters have an infrastructure-limited demand for natural gas leaving the rest of the natural gas for domestic consumption. As most LNG infrastructure facilities are built on a project finance basis and underpinned by long-term contracts, this demand can be anticipated by the market years in advance, reducing the likelihood of volatility. The macroeconomy and jobs The macroeconomic and job implications of LNG exports depend on two principal factors: the gains from trade from exploiting pricing differentials and inefficiencies of the global market; and the employment implications of those gains, higher domestic natural gas prices, and greater domestic natural gas production. The Department of Energy has commissioned a study on both the macroeconomic and employment implications of U.S. LNG exports, which will be released later this year. This study will provide a qualitative assessment of the implications of LNG exports to the U.S. economy and employment. LNG exports are likely to be a net benefit to the U.S. economy, although probably not a significant contributor in terms of total U.S. GDP. Exports of U.S. natural gas will take advantage of the benefits of the existing producer’s surplus resulting from the pricing differentials between the natural gas markets in the United States, Europe, and Asia. Contractual terms will determine how this surplus is shared between U.S. sellers and foreign buyers. 104 The benefit of this trade will likely outweigh the cost to domestic consumers of the increase in the price of natural gas as most of the natural gas demanded by exports will come from new natural gas production as opposed to displacing existing production from domestic consumers. On the other hand, LNG exports from the United States are likely to put marginal upward pressure on the relative value of the U.S. dollar. In March 2012, Citigroup released a report on North American hydrocarbon production that included a model of the macroeconomic impact of U.S. oil and gas exports. The Citi analysis found that oil and gas exports would cause a nearly two percent decline in the current account deficit by 2020, but that the exchange rate implications would be modest. By 2020, the U.S. dollar would appreciate by between 1.6 and 5.4 percent. 105 The implications of LNG exports on job creation are similarly difficult to quantify. Other than temporary construction jobs created by the need to build liquefaction capacity, pipelines, and other ancillary infrastructure, the operation of the liquefaction facility will likely provide little permanent employment benefit. As outlined in the section on price impacts above, as much of the gas for export will come from new production, rather than the displacement of consumption in other sectors, the negative economic, and therefore jobrelated, effects on those sectors is likely to be limited. Beyond the labor required for additional gas production to satisfy LNG exports, the net impact of LNG exports is likely to be minimal. Further upstream, the job potential may be greater. By increasing domestic natural gas production, employment from additional oil and gas producers will increase, as will the demand for manufacturers of equipment for oil and gas production, gathering, and transportation. domestic energy security Aside from the price impact of potential U.S. LNG exports, a major concern among opponents is that such exports would diminish U.S. “energy security”; that exports would deny the United States of a strategically important resource. The extent to which such concerns are **valid** depends on several factors, including the size of the domestic resource base, and the liquidity and functionality of global trade. As Part I of this report notes, geological evidence suggests that the volumes of LNG export under consideration would not materially affect the availability of natural gas for the domestic market. Twenty years of LNG exports at the rate of 6 bcf/day, phased in over the course of 6 years, would increase demand by approximately 38 tcf. As presented in Part I, four existing estimates of total technically recoverable shale gas resources range from 687 tcf to 1,842 tcf; therefore, exporting 6 bcf/day of LNG over the course of twenty years would consume between 2 and 5.5 percent of total shale gas resources. While the estimates for **shale gas reserves are uncertain**, in a scenario where reserves are perceived to be lower than expected, domestic natural gas prices would increase and exports would almost immediately become uneconomic. In the long-term, it is possible that U.S. prices and international prices will converge to the point at which they settle at similar levels. In that case, the United States would have more than adequate import capacity (through bi-directional import/export facilities) to import gas when economic. A further gas-related consideration with regard to energy security is the effects of increased production of associated natural gas with the increasing volumes of U.S. unconventional oil. As the primary energy-security concern for the United States related to oil, the application of fracking and horizontal drilling in oil production is reducing U.S. oil import dependence, while simultaneously producing substantial volumes of natural gas, which, given the relative economics of oil and gas, is effectively delivered at zero (or, in the case of producers who have to invest in equipment to manage flaring and venting, negative) cost. To the extent that associated gas from unconventional oil production is used for LNG export, it can be seen as a consequence of—rather than a threat to—increased U.S. energy security. international implications The international implications of LNG exports from the United States can be divided into pricing, geopolitics, and environment. international Pricing As discussed in Part I, the global LNG market is informally separated into three markets: North America, the Atlantic Basin (mostly Europe), and the Pacific Basin (including Japan, South Korea, Taiwan, China, and India). These markets are separated because of important technical differences that impact the pricing structure for LNG in each market. The North American natural gas market is competitive and prices are traded in a transparent and open market. The Atlantic Basin is dominated by European LNG consumers such as the United Kingdom, Spain, France, and Italy, and is a hybrid of a competitive U.K. market that was liberalized in the mid-1990s and a Continental European market that is dominated by oil-linked, take-or-pay contracts. In recent years, the U.K. hub, the National Balancing Point (NBP), has traded at a premium to the U.S. hub, the Henry Hub. The Pacific Basin is a more rigid market that depends heavily on oilindexed contracts that are more expensive than those used in the Atlantic Basin. While they have no central trading hub, the Pacific Basin consumers such as Japan and South Korea (which is implementing its recently-signed free-trade agreement with the United States) currently import LNG based on a pricing formula known informally as the Japan Crude Cocktail, the average price of custom-cleared oil imports into Tokyo. Many Pacific Basin contracts have a built-in price floor and price ceiling depending on the price of oil. 106 Without exporting any natural gas, the U.S. shale gas “revolution” has already had a positive impact on the liquidity of global LNG markets. Many LNG cargoes that were previously destined for gas-thirsty U.S. markets were diverted and served spot demand in both the Atlantic and Pacific Basins. The increased availability of LNG cargoes has helped create a looser LNG market for other consumers (see figure 9). This in turn has helped apply downward pressure to the terms of oillinked contracts resulting in the renegotiation of some contracts, particularly in Europe. Increased availability of LNG cargoes also accelerated a recent trend of increasing reliance of consumers on spot LNG markets. In 2010 short-term and spot contracts represented 19 percent of the total LNG market, up from only a fraction one decade earlier. 107 In this case, increasing demand for spot cargoes indicates that consumers are taking advantage of spot prices that are lower than oilindexed rates. LNG exports will help to sustain market liquidity in what looks to be an increasingly tight LNG market beyond 2015 (see figure 10). Should LNG exports from the United States continue to be permitted, they will add to roughly 10 bcf/day of LNG that is expected to emerge from Australia between 2015 and 2020. Nevertheless, given the projected growth in demand for natural gas in China and India and assuming that some of Japan’s nuclear capacity remains offline, demand for natural gas will outpace the incremental supply. This makes U.S. LNG even more valuable on the international market. Although it will be important to global LNG markets, it is unlikely that the emergence of the United States as an exporter of LNG will change the existing pricing structure overnight. Not only is the market still largely dependent on long-term contracts, the overwhelming majority of new liquefaction capacity emerging in the next decade (largely from Australia) has already been contracted for at oil-indexed rates. 108 The incremental LNG volumes supplied by the United States at floating Henry Hub rates will be small in comparison. But while U.S. LNG will not have a transformational impact, by establishing an alternate lower price for LNG derived through a different market mechanism, U.S. exports may be central in catalyzing future changes in LNG contract structure. As previously mentioned, this impact is already be ing felt in Europe. A number of German utilities have either renegotiated contracts or are seeking arbitration with natural gas suppliers in Norway and Russia. The Atlantic Basin will be a more immediate beneficiary of U.S. LNG exports than the Pacific Basin as many European contracts allow for periodic revisions to the oil-price linkage. 109 In the Pacific Basin this contractual arrangement is not as common and most consumers are tied to their respective oil-linkage formulae for the duration of the contract. 110 Despite the increasing demand following the Fukushima nuclear accident, however, Japanese LNG consumers are actively pursuing new arrangements for LNG contracts. 111 There are other limits to the extent of the impact that U.S. LNG will have on global markets. It is unlikely that many of the LNG export facilities under consideration will reach final investment decision. Instead, it is more probable that U.S. natural gas prices will have rebounded sufficiently to the point that exports are not commercially viable beyond a certain threshold. (figure 11 illustrates the estimated costs of delivering LNG to Japan in 2020.) This threshold, expected by many experts to be roughly 6 bcf/day by 2025, is modest in comparison to the roughly 11 bcf/day of Australian LNG export projects that have reached final investment decision and are expected to be online by 2020. Also, the impact of U.S. LNG exports could be limited by a number of external factors that will have a larger bearing on the future of global LNG prices. For instance, a decision by the Japanese government to phase-out nuclear power would significantly tighten global LNG markets and probably displace any benefit provided by U.S. LNG exports. Conversely, successful and rapid development of China’s shale gas reserves would limit the demand of one of the world’s fastest-growing natural gas consumers. However, to the extent that U.S. LNG exports can help bring about a more globalized pricing structure, they will have economic and geopolitical consequences. Geopolitics A large increase in U.S. LNG exports would have the potential to increase U.S. foreign policy interests in both the Atlantic and Pacific basins. Unlike oil, natural gas has traditionally been an infrastructure-constrained business, giving geographical proximity and political relations between producers and consumers a high level of importance. Issues of “pipeline politics” have been most directly visible in Europe, which relies on Russia for around a third of its gas. Previous disputes between Moscow and Ukraine over pricing have led to major gas shortages in several E.U. countries in the winters (when demand is highest) of both 2006 and 2009. Further disagreements between Moscow and Kiev over the terms of the existing bilateral gas deal have the potential to escalate again, with negative consequences for E.U. consumers. The risk of high reliance on Russian gas has been a principal driver of European energy policy in recent decades. Among central and eastern European states, particularly those formerly aligned with the Soviet Union such as Poland, Hungary, and the Czech Republic, the issue of reliance on imports of Russian gas is a primary energy security concern and has inspired energy policies aimed at diversification of fuel sources for power generation. From the U.S. perspective such Russian influence in the affairs of these democratic nations is an impediment to efforts at political and economic reform. The market power of Gazprom, Russia’s state-owned gas monopoly, is evident in these countries. Although they are closer to Russia than other consumers of Russian gas in Western Europe, many countries in Eastern and Central Europe pay higher contract prices for their imports, as they are more reliant on Russian gas as a proportion of their energy mixes. In the larger economies of Western Europe, which consume most of Russia’s exports, there are efforts to diversify their supply of natural gas. The E.U. has formally acknowledged the need to put in place mechanisms to increase supply diversity. These include market liberalization approaches such as rules mandating third-party access to pipeline infrastructure (from which Gazprom is demanding exemption), and commitments to complete a single market for electricity and gas by 2014, and to ensure that no member country is isolated from electricity and gas grids by 2015. 112 Despite these formal efforts, there are several factors retarding the E.U.’s push for a unified effort to reduce dependence on Russian gas. National interest has been given a higher priority than collective, coordinated E.U. energy policy: the gas cutoffs in 2006 and 2009 probably contributed to the acceptance of the Nord Stream project, which carries gas from Russia into Germany. Germany’s decision to phase out its fleet of nuclear reactors by 2022 will result in far higher reliance on natural gas for the E.U.’s biggest economy. The environmental imperative to reduce carbon emissions—codified in the E.U.’s goal of essentially decarbonizing its power sector by the middle of century—mean that natural gas is being viewed by many as the short-to medium fuel of choice in power generation. Finally, the prospects for European countries to replicate the unconventional gas “revolution” that has resulted in a glut of natural gas in the United States look uncertain. Several countries, including France and the U.K., have encountered stiff public opposition to the techniques used in unconventional gas production, while those countries, such as Poland and Hungary, that have moved ahead with unconventional-gas exploration have generally seen disappointing early results. Collectively, these factors suggest that the prospects for reduced European reliance on Russian gas appear dim. The one factor that has been working to the advantage of advocates of greater European gas diversity has been the increased liquidity of the global LNG market, discussed above. Russia’s dominant position in the European gas market is being eroded by the increased availability of LNG. Qatar’s massive expansion in LNG production in 2008, coupled with the rise in unconventional gas production in the United States as well as a drop in global energy demand due to the global recession, produced a global LNG glut that saw many cargoes intended for the U.S. market diverted into Europe. As mentioned previously, with an abundant source of alternative supply, some European consumers, mainly Gazprom’s closest partners, were able to renegotiate their oil-linked, takeor-pay contracts with Gazprom. As figure 10 illustrates, however, in the wake of the Fukushima natural disaster and nuclear accident in Japan and a return to growth in most industrialized economies, the LNG market is projected to tighten considerably in the short-term, potentially returning market power to Russia. However, there is a second, structural change to the global gas market that may have more lasting effects to Russia’s market power in the European gas market. LNG is one of the fastest growing segments of the energy sector. The growth of the LNG market, both through long-term contract and spot-market sales, is likely to put increasing pressure on incumbent pipeline gas suppliers. A significant addition of U.S. LNG exports will accelerate this trend. In addition to adding to the size of the market, U.S. LNG contracts are likely to be determined on a “floating” basis, with sales terms tied to the price of a U.S. benchmark such as Henry Hub, eroding the power of providers of long-term oil linked contract suppliers such as Russia. While U.S. LNG will not be a direct tool of U.S. foreign policy—the destination of U.S. LNG will be determined according to the terms of individual contracts, the spot-price-determined demand, and the LNG traders that purchase such contracts—the addition of a large, market-based producer will indirectly serve to increase gas supply diversity in Europe, thereby providing European consumers with increased flexibility and market power. Increased LNG exports will provide similar assistance to strategic U.S. allies in the Pacific Basin. By adding supply volumes to the global LNG market, the U.S. will help Japan, Korea, India, and other import-dependent countries in South and East Asia to meet their energy needs. The desire on the part of Pacific Basin countries for the U.S. to become a gas supplier to the region has been underlined by the efforts of the Japanese government, which has attempted to secure a free-trade agreement waiver from the United States to allow exports. As with oil price-linked Russian gas contracts in Eu- rope, U.S. LNG exports linked to a floating Henry Hub benchmark, have the potential to weaken the market power of incumbent LNG providers to Asia, increasing the negotiating power of consumers and decreasing the price. As U.S. foreign policy undergoes a “pivot to Asia,” the ability of the U.S. to provide a degree of increased energy security and pricing relief to LNG importers in the region will be an important economic and strategic asset. Beyond the basin-specific considerations of U.S. LNG exports, they would provide a source of predictable natural gas supply that is relatively free from unexpected production or shipping disruption. With Qatar representing roughly one-third of the global LNG market, a blockade or military intervention in the Strait of Hormuz or a direct attack on Qatar’s liquefaction facilities by Iran would inflict chaos on world energy markets. While the United States government will be unable to physically divert LNG cargoes to specific markets or strategic allies that are most affected (gas allocation will be made by the market players), additional volumes of LNG on the world market will benefit all consumers. international Environmental implications Proposed LNG exports from the United States have encountered domestic opposition on environmental grounds. As outlined in Part I, natural gas production causes greenhouse gas emissions in the upstream production process through leakages, venting, and flaring. The greenhouse gas footprint of shale gas production has been the subject of vigorous debate, with some studies suggesting that methane from the production process leads to shale gas having a higher global warming impact than that of other hydrocarbons including coal. While the methodology underlying such studies has been widely criticized, there is no doubt that leakage and venting of natural gas is a serious negative environmental consequence of natural gas production and transportation: EPA has estimated that worldwide leakages and venting volumes were 3,353.5 bcf in 2010. 113 By contrast, some advocates of U.S. exports of LNG maintain that they have the potential to bring global environmental benefits if they are used to displace more carbon-intensive fuels. According to the IEA, natural gas in general has the potential to reduce carbon dioxide emissions by 740 million tonnes in 2035, nearly half of which could be achieved by the displacement of coal in China’s power-generation portfolio. Natural gas—in the form of LNG—also has the potential to displace more carbon-intensive fuels in other major energy users, including across the EU and in Japan, which is being forced to burn more coal and oil-based fuels to make up for the nuclear generation capacity lost in the wake of the Fukushima disaster. In addition to its relatively lower carbon-dioxide footprint, natural gas produces lower emissions of pollutants such as sulfur dioxide nitrogen oxide and other particulates than coal and oil. Natural gas—both in the form of LNG and compressed natural gas—is also being viewed as a potential replacement for oil in the vehicle transportation fleet, with large carbon dioxide abatement potential. 114 However, as discussed in Part I, even the United States with its low gas prices is unlikely to see any significant move toward natural gas vehicles in the absence of government policies; the prospects for such vehicles entering the European or Asian markets, where gas is several times as expensive, are remote. On the other hand, additional volumes of natural gas in the global power generation fleet may also have longer-term detrimental consequences for carbon emissions. According to the IEA, by backing out nuclear and renewable energy generation, natural gas could add 320Mt of carbon dioxide by 2035. 115 Whether U.S. LNG exports contribute to reduced carbon dioxide emissions through the displacement of coal fired power generation or to the crowding out of renewable and nuclear energy in the global energy mix is something of a moot point. According to the IEA, global power generation is projected to exceed 27,000 terawatt hours per year by 2020. 116 Even assuming U.S. exports of 6 bcf/day (on the upper end of the range of expectations), zero losses due to transportation, regasification, and transmission, and a high natural gas power plant efficiency level of 60 percent, such volumes would account for just over one percent of total global power generation. 117 Therefore, although the domestic environmental impacts associated with shale gas extraction may, pending the outcome of further study, prove to be a cause for concern with respect to greenhouse gas emissions, the potential for U.S. LNG exports to make a meaningful impact on global emissions through changes to the global power generation mix is negligible. T his paper has attempted to answer two questions: Are U.S. LNG exports feasible? If so, what are the implications of U.S. LNG exports? **For exports to be feasible, several demand and supply-related conditions need to be met**. On the supply side, adequate resources must be available and their production must be sustainable over the long-term. The regulatory and policy environment will need to accommodate natural gas production to ensure that the resources are developed. The capacity and infrastructure required to enable exports must also be in place. This includes the adequacy of the pipeline and storage network, the availability of shipping capacity, and the availability of equipment for production and qualified engineers. On the demand side, LNG exports will compete with two main other domestic end uses for natural gas: the power-generation sector, and the industrial and petrochemical sector. According to most projections, the U.S. electricity sector will see an increased demand for natural gas as it seeks to comply with policies and regulations aimed at reducing carbon-dioxide emissions and pollutants from the power-generation fleet. Cheaper natural gas in the industrial sector has the potential to lower the cost of petrochemical production and to improve the competitiveness of a range of refining and manufacturing operations. Advocates of natural gas usage in the transportation fleet – particularly in heavy-duty vehicles (HDVs) – see it as a way to decrease the country’s dependence on oil, although absent major policy support, this sector is unlikely to represent a significant source of gas demand. For increased U.S. LNG exports to be feasible, they will also need to be competitive with supplies from other sources. The major demand centers that would import U.S. LNG would be Pacific Basin consumers (Japan, South Korea, and Taiwan, and increasingly China and India), and Atlantic Basin consumers, mostly in Europe. The supply and demand balance in the Atlantic and Pacific Basins and, therefore the feasibility for natural gas exports from the United States, depend heavily on the uncertain outlook for international unconventional natural gas production. Recent assessments in countries such as China, India, Ukraine, and Poland indicate that each country has significant domestic shale gas reserves. If these reserves are developed effectively—which is likely to be difficult in the short-term due to a lack of infrastructure, physical capacity, and human capacity—many of these countries would dramatically decrease their import dependence, with negative implications for existing and newcomer LNG exporters. Detailed analysis of the foregoing factors suggests that the exportation of liquefied natural gas from the United States is logistically feasible. Based on current knowledge, the domestic U.S. natural gas resource base is large enough to accommodate the potential increased demand for natural gas from the electricity sector, the industrial sector, the residential and commercial sectors, the transportation sector, and exporters of LNG. Other obstacles to production, including infrastructure, investment, environmental concerns, and human capacity, are likely to be surmountable. Moreover, the current and projected supply and demand fundamentals of the international LNG market are conducive to competitive U.S.-sourced LNG. While LNG exports may be practically feasible, they will be subject to approval by policy makers if they are to happen. In making a determination on the advisability of exports, the federal government will focus on the likely implications of LNG exports: i.e. whether LNG exports are in the “public interest.” The extent of the domestic implications is largely dependent upon the price impact of exports on domestic natural gas prices. While it is clear that domestic natural gas prices will increase if natural gas is exported, most existing analyses indicate that the implications of this price increase are likely to be modest.

#### Nuclear power makes exports politically viable

Perry 12 (Mark J., Scholar – AEI, Professor of Economics and Finance – University of Michigan, “Natural gas and nuclear power need to share the lead in power generation for the future,” American Enterprise Institute, 9-26, http://www.aei.org/article/natural-gas-and-nuclear-power-need-to-share-the-lead-in-power-generation-for-the-future/)

Recent advances in drilling technologies have unleashed a boom in domestic natural gas production. The United States may have more than 100 years' worth of gas reserves, and perhaps much more, including large untapped resources in Michigan. Policy makers are increasingly looking to natural gas as the locomotive of economic growth. A striking example is the increasing use of gas in electricity production. For the last several years, natural gas has accounted for more than 80% of new electric generating capacity in the United States. It now provides 32% of total electricity generation, up from 25% just two years ago, and its share could reach 50% by 2030. Natural gas, of course, has many virtues as a fuel. Its carbon content is less than half that of coal and it emits no mercury or other toxic particulates. But natural gas is needed for **much more than electricity generation**. In addition to residential and commercial heating, gas accounts for the bulk of the fuel used by the petrochemical industry. Manufacturing relies on the availability of cheap gas, and its use in transportation is increasing. Additionally, gas producers are **gearing up to export some of the gas to markets in Europe and Asia**, where gas costs up to five times more than it does in the United States. A dozen or more U.S. companies have applied for licenses to export liquefied natural gas from terminals, mainly on the Gulf of Mexico. Because of its multiple uses and rising popularity, the demand for natural gas is starting to increase, and its price could rise significantly. That is a real possibility, and would be consistent with its long history of price volatility. If we hope to maintain the security of our energy supply, we will need to expand the use of other energy sources, including nuclear power, which is also environmentally attractive and affordable. Although the capital cost of building a nuclear plant is high, the average price of nuclear-generated electricity is **lower than** power produced from **natural gas**. In 2011, the production cost of nuclear power was 2.19 cents per kilowatt-hour, compared to 4.51 cents for natural gas and 3.23 cents for coal. Today about 20% of America’s electricity comes from nuclear power. But demand for electricity is growing steadily and that trend will continue in the future. Without building new nuclear plants, pressure will build to use even more natural gas for electricity generation, making less available for manufacturing and transportation.

#### Perception of the plan triggers the link

Burnes et al 12-7 (John, Lisa Epifani, Curt Moffatt, Janna Chesno, Partner – VanNess Feldman, “DOE Releases LNG Export Study and Requests Public Comment,” VanNess Feldman, 2012, http://www.vnf.com/news-alerts-778.html)

Exports of natural gas, including LNG, must be authorized by DOE’s Office of Fossil Energy. By statute, exports of LNG to FTA nations must be approved “without modification or delay”. By contrast, before approving an application to export LNG to non-FTA nations, DOE must determine that the export is and will remain in the “public interest”. DOE’s primary focus is upon the domestic need for the gas to be exported. In May 2011, DOE conditionally authorized Sabine Pass Liquefaction, LLC (Sabine Pass) to export LNG to non-FTA nations. The authorization was finalized in August 2012. This remains the only long-term DOE authorization to export LNG from the lower 48 states to non-FTA nations. In the Sabine Pass order, DOE determined that it had a continuing duty to protect the public interest, and announced that it would monitor gas supply/demand conditions in the United States and the world to ensure that the cumulative impacts of the exports authorized in the order and in future orders would not lead to a reduction in the supply of natural gas needed to meet essential domestic needs. DOE also provided notice that it would take any action in the future, including amending or even revoking export authorizations, as appropriate or necessary to protect the public interest.

#### That kills Russia’s economy

Mead 12

Walter Russell Mead, April 25, 2012 (Professor of Foreign Affairs and Humanities at Bard College, Henry A. Kissinger senior fellow for U.S. foreign policy at the Council on Foreign Relations (CFR), and Editor-at-Large of The American Interest magazine), , The American Interest, North American Shale Gas Gives Russia Serious Headache, <http://blogs.the-american-interest.com/wrm/2012/04/25/north-american-shale-gas-gives-russia-serious-headache/>

North America’s shale gas boom is chipping away at the market for gas producers like Russia. What’s more, if the United States becomes a gas exporter, Russia’s customers (especially in Europe) could decide to cancel expensive contracts with Gazprom in favor of cheaper American natural gas. “If the US starts exporting LNG to Europe and Asia, it gives [customers there] an argument to renegotiate their prices with Gazprom and Qatar, and they will do it,” says Jean Abiteboul, head of Cheniere supply & marketing. Gazprom supplied 27 percent of Europe’s natural gas in 2011. While American gas is trading below $2 per MMBTU (million British thermal units), Gazprom’s prices are tied to crude oil markets, and its long-term contracts charge customers roughly $13 per MMBTU, says the *FT*. European customers would love to reduce their dependence on Gazprom and start to import American gas. Already Gazprom has had to make concessions to its three biggest customers, and others are increasingly dissatisfied with their contracts. Worse, from Russia’s point of view: evidence that western and central Europe contain substantial shale gas reserves of their own. Fracking is unpopular in thickly populated, eco-friendly Europe, but so are high gas prices. All this ought to give Russia serious heartburn. Eroding Gazprom’s dominance of the European energy market would be a major check on Russian economic growth and political influence.

**Goes nuclear**

**Filger 9** (Sheldon, Columnist and Founder – Global EconomicCrisis.com, “Russian Economy Faces Disasterous Free Fall Contraction”, <http://www.huffingtonpost.com/sheldon-filger/russian-economy-faces-dis_b_201147.html>)

In Russia, historically, economic health and political stability are intertwined to a degree that is rarely encountered in other major industrialized economies. It was the economic stagnation of the former Soviet Union that led to its political downfall. Similarly, Medvedev and Putin, both intimately acquainted with their nation's history, are unquestionably alarmed at the prospect that Russia's economic crisis will endanger the nation's political stability, achieved at great cost after years of chaos following the demise of the Soviet Union. Already, strikes and protests are occurring among rank and file workers facing unemployment or non-payment of their salaries. Recent polling demonstrates that the once supreme popularity ratings of Putin and Medvedev are eroding rapidly. Beyond the political elites are the financial oligarchs, who have been forced to deleverage, even unloading their yachts and executive jets in a desperate attempt to raise cash. Should the Russian economy deteriorate to the point where economic collapse is not out of the question, the impact will go far beyond the obvious accelerant such an outcome would be for the Global Economic Crisis. There is a geopolitical dimension that is even more relevant then the economic context. Despite its economic vulnerabilities and perceived decline from superpower status, Russia remains one of only two nations on earth with a nuclear arsenal of sufficient scope and capability to destroy the world as we know it. For that reason, it is not only President Medvedev and Prime Minister Putin who will be lying awake at nights over the prospect that a national economic crisis can transform itself into a virulent and destabilizing social and political upheaval. It just may be possible that U.S. President Barack Obama's national security team has already briefed him about the consequences of a major economic meltdown in Russia for the peace of the world. After all, the most recent national intelligence estimates put out by the U.S. intelligence community have already concluded that the Global Economic Crisis represents the greatest national security threat to the United States, due to its facilitating political instability in the world. During the years Boris Yeltsin ruled Russia, security forces responsible for guarding the nation's nuclear arsenal went without pay for months at a time, leading to fears that desperate personnel would illicitly sell nuclear weapons to terrorist organizations. If the current economic crisis in Russia were to deteriorate much further, how secure would the Russian nuclear arsenal remain? It may be that the financial impact of the Global Economic Crisis is its least dangerous consequence.

### 1NC

#### Electricity prices are declining

**Burtraw 8/21/12** (one of the nation’s foremost experts on environmental regulation in the electricity sector “Falling Emissions and Falling Prices: Expectations for the Domestic Natural Gas Boom” http://common–resources.org/2012/falling–emissions–and–falling–prices–expectations–for–the–domestic–natural–gas–boom/)

Moreover, the boom in domestic natural gas production could have even more immediate affects for U.S. electricity consumers. The increased supply of gas is expected to lower natural gas prices and retail electricity prices over the next 20 years, according to a [new RFF Issue Brief](http://www.rff.org/Publications/Pages/PublicationDetails.aspx?PublicationID=22019). These price decreases are expected to be even larger if demand for electricity continues on a slow–growth trajectory brought on by the economic downturn and the increased use of energy efficiency.For example, RFF analysis found that delivered natural gas prices would have been almost 35% higher in 2020 if natural gas supply projections had matched the lower estimates released by the U.S. Energy Information Administration (EIA) in 2009. Instead, with an increased gas supply, consumers can expect to pay $4.9 per MMBtu for delivered natural gas in 2020 instead of $6.6 per MMBtu. These trends are even more exaggerated if demand for electricity were to increase to levels projected by the EIA just three years ago, in 2009.This decrease in natural gas prices is expected to translate into a decrease in retail electricity prices for most electricity customers in most years out to 2020. Compared to the world with the lower gas supply projections, average national electricity prices are expected to be almost 6% lower, falling from 9.25 cents to 8.75 cents per kilowatt–hour in 2020. Residential, commercial, and industrial customers are all expected to see a price decrease, with the largest price changes occurring in parts of the country that have competitive electricity markets. All of these prices decreases translate into real savings for most electricity customers. The savings are largest for commercial customers, who stand to save $33.9 Billion (real $2009) under the new gas supply projections in 2020. Residential customers also stand to save big, with estimates of $25.8 Billion (real $2009) in savings projected for 2020.

#### New nuclear reactors drive up electricity prices

Cooper 9 (Mark, SENIOR FELLOW FOR ECONOMIC ANALYSIS INSTITUTE FOR ENERGY AND THE ENVIRONMENT VERMONT LAW SCHOOL, "THE ECONOMICS OF NUCLEAR REACTORS: RENAISSANCE OR RELAPSE?," http://www.vermontlaw.edu/Documents/Cooper%20Report%20on%20Nuclear%20Economics%20FINAL%5B1%5D.pdf)

Within the past year, estimates of the cost of nuclear power from a new generation of reactors have ranged from a low of 8.4 cents per kilowatt hour (kWh) to a high of 30 cents. This paper tackles the debate over the cost of building new nuclear reactors, with the key findings as follows: • The initial cost projections put out early in today’s so–called “nuclear renaissance” were about one–third of what one would have expected, based on the nuclear reactors completed in the 1990s. • The most recent cost projections for new nuclear reactors are, on average, over four times as high as the initial “nuclear renaissance” projections. • There are numerous options available to meet the need for electricity in a carbon–constrained environment that are superior to building nuclear reactors. Indeed, nuclear reactors are the worst option from the point of view of the consumer and society. • The low carbon sources that are less costly than nuclear include efficiency, cogeneration, biomass, geothermal, wind, solar thermal and natural gas. Solar photovoltaics that are presently more costly than nuclear reactors are projected to decline dramatically in price in the next decade. Fossil fuels with carbon capture and storage, which are not presently available, are projected to be somewhat more costly than nuclear reactors. • Numerous studies by Wall Street and independent energy analysts estimate efficiency and renewable costs at an average of 6 cents per kilowatt hour, while the cost of electricity from nuclear reactors is estimated in the range of 12 to 20 cents per kWh. • The additional cost of building 100 new nuclear reactors, instead of pursuing a least cost efficiency–renewable strategy, would be in the range of $1.9–$4.4 trillion over the life the reactors. Whether the burden falls on ratepayers (in electricity bills) or taxpayers (in large subsidies), incurring excess costs of that magnitude would be a substantial burden on the national economy and add immensely to the cost of electricity and the cost of reducing carbon emissions.

#### K2 Econ

Perry 12 (Mark, Prof of Economics @ Univ. of Michigan, "America's Energy Jackpot: Industrial Natural Gas Prices Fall to the Lowest Level in Recent History," http://mjperry.blogspot.com/2012/07/americas–energy–jackpot–industrial.html)

Building petrochemical plants could suddenly become attractive in the United States. Manufacturers will "reshore" production to take advantage of low natural gas and electricity prices. Energy costs will be lower for a long time, giving a competitive advantage to companies that invest in America, and also helping American consumers who get hit hard when energy prices spike. After years of bad economic news, the natural gas windfall is very good news. Let's make the most of it." The falling natural gas prices also make the predictions in this December 2011 study by PriceWaterhouseCoopers, "Shale gas: A renaissance in US manufacturing?"all the more likely: U.S. manufacturing companies (chemicals, metals and industrial) could employ approximately one million more workers by 2025 because of abundant, low–priced natural gas. Lower feedstock and energy cost could help U.S. manufacturers reduce natural gas expenses by as much as $11.6 billion annually through 2025. MP: As I have emphasized lately, America's ongoing shale–based energy revolution is one of the real bright spots in an otherwise somewhat gloomy economy, and provides one of the best reasons to be bullish about America's future. The shale revolution is creating thousands of well–paying, shovel–ready jobs in Texas, North Dakota and Ohio, and thousands of indirect jobs in industries that support the shale boom (sand, drilling equipment, transportation, infrastructure, steel pipe, restaurants, etc.). In addition, the abundant shale gas is driving down energy prices for industrial, commercial, residential and electricity–generating users, which frees up billions of dollars that can be spent on other goods and services throughout the economy, providing an energy–based stimulus to the economy. Cheap natural gas is also translating into cheaper electricity rates, as low–cost natural gas displaces coal. Further, cheap and abundant natural gas is sparking a manufacturing renaissance in energy–intensive industries like chemicals, fertilizers, and steel. And unlike renewable energies like solar and wind, the natural gas boom is happening without any taxpayer–funded grants, subsidies, credits and loans. Finally, we get an environmental bonus of lower CO2 emissions as natural gas replaces coal for electricity generation. Sure seems like a win, win, win, win situation to me.

#### Nuke war

Auslin 9 (Michael, Resident Scholar – American Enterprise Institute, and Desmond Lachman – Resident Fellow – American Enterprise Institute, “The Global Economy Unravels”, Forbes, 3–6, http://www.aei.org/article/100187)

What do these trends mean in the short and medium term? The Great Depression showed how social and global chaos followed hard on economic collapse. The mere fact that parliaments across the globe, from America to Japan, are unable to make responsible, economically sound recovery plans suggests that they do not know what to do and are simply hoping for the least disruption. Equally worrisome is the adoption of more statist economic programs around the globe, and the concurrent decline of trust in free–market systems. The threat of instability is a pressing concern. China, until last year the world's fastest growing economy, just reported that 20 million migrant laborers lost their jobs. Even in the flush times of recent years, China faced upward of 70,000 labor uprisings a year. A sustained downturn poses grave and possibly immediate threats to Chinese internal stability. The regime in Beijing may be faced with a choice of repressing its own people or diverting their energies outward, leading to conflict with China's neighbors. Russia, an oil state completely dependent on energy sales, has had to put down riots in its Far East as well as in downtown Moscow. Vladimir Putin's rule has been predicated on squeezing civil liberties while providing economic largesse. If that devil's bargain falls apart, then wide–scale repression inside Russia, along with a continuing threatening posture toward Russia's neighbors, is likely. Even apparently stable societies face increasing risk and the threat of internal or possibly external conflict. As Japan's exports have plummeted by nearly 50%, one–third of the country's prefectures have passed emergency economic stabilization plans. Hundreds of thousands of temporary employees hired during the first part of this decade are being laid off. Spain's unemployment rate is expected to climb to nearly 20% by the end of 2010; Spanish unions are already protesting the lack of jobs, and the specter of violence, as occurred in the 1980s, is haunting the country. Meanwhile, in Greece, workers have already taken to the streets. Europe as a whole will face dangerously increasing tensions between native citizens and immigrants, largely from poorer Muslim nations, who have increased the labor pool in the past several decades. Spain has absorbed five million immigrants since 1999, while nearly 9% of Germany's residents have foreign citizenship, including almost 2 million Turks. The xenophobic labor strikes in the U.K. do not bode well for the rest of Europe. A prolonged global downturn, let alone a collapse, would dramatically raise tensions inside these countries. Couple that with possible protectionist legislation in the United States, unresolved ethnic and territorial disputes in all regions of the globe and a loss of confidence that world leaders actually know what they are doing. The result may be a series of small explosions that coalesce into a big bang.

### 1NC

#### Text: the United States should propose a package deal that:

-**develops a nuclear fuel bank in Kazakhstan**

**-offers increased economic cooperation, investment in Iran’s gas sector and no longer pursues regime change in Iran on the condition that Iran accepts to be a part of the international fuel bank**

**-creates a pilot enrichment facility in Iran that is monitored by the IAEA every 60 days**

#### Solves nuclear leadership – avoids disads

CSIS 9 (Center for Strategic and International Studies, “Time for a More Creative Negotiating Strategy with Iran,” 9-4, http://csis.org/blog/time-more-creative-negotiating-strategy-iran)

The Way Forward: Staged Negotiations The main problem with the U.S. negotiating strategy is that we are not showing any flexibility. Both Bush and Obama insisted that Iran suspend enrichment as a precondition for negotiations. This rigid approach prevents either side from work out a compromise. A better approach would be a more staged negotiation strategy. Iran has prepared a new offer (which admittedly won’t be very different) and has shown a willingness to negotiate. The United States could use this as an opportunity to show flexibility and test whether Iran is serious about negotiating. Iran’s proposal will likely focus on increased IAEA access and inspections. The United States should build on this offer by again bringing up the fuel bank proposal. We could make clear that we support their right to nuclear energy and support a proposal to place a fuel bank in a country like Russia or Kazakhstan, where Iran would have more confidence that they would be able to have a stable access to nuclear fuel. In exchange for giving the full fuel cycle, the United States could offer increased economic cooperation and a promise to no longer pursue or threaten regime change. Iran’s initial positive comments suggest they might be willing to accept this offer. However, they would likely say no. Bruno Pellaud, the IAEA’s former deputy director-general for safeguards, has said that current fuel bank proposals wouldn’t be accepted by Iran because they would not be on Iran’s soil, But Pellaud says a fuel bank is not likely to be a short-term solution for the Iran crisis. He says there is a deep feeling in Iran, currently projected by its hard-line government, that it should have the whole fuel cycle and not depend on foreign resources. Tehran so far only appears interested in international partnerships involving uranium-enrichment programs on Iranian soil. However, if we want to find a negotiated solution, we should not stop there. As a fallback, the United States should propose a single pilot facility on Iran’s soil that would contribute to the international fuel bank, along with even more economic cooperation, such as investment in Iran’s gasoline refinery sector. The reactor could provide fuel to Iran, and excess fuel to be sold to other developing countries. According to Gareth Evans, a former foreign minister of Australia, who is president of the International Crisis Group, this is the only solution that could be politically acceptable for all sides, The red line that matters is the one at the heart of the Non-Proliferation Treaty, between civilian and military capability. If Iran’s neighbors, including Israel, and the wider world could be confident that that line would hold, it would not matter whether Iran was capable of producing its own nuclear fuel. That line will hold if we can get Iran to accept a highly intrusive monitoring, verification and inspection regime that goes well beyond basic Non-Proliferation Treaty safeguards…and to have any industrial-scale activity conducted not by Iran alone but by an international consortium. Although Iran will hold out for as much as it can get and for as long as it can, it is capable of being persuaded…But negotiations won’t go anywhere if the United States and European Union continue to insist on zero enrichment. In Iran two weeks ago, I heard nothing from anyone, in or out of government, to suggest that any member of the current power elite thought the benefits of a nuclear weapons program — including for deterrence or asserting regional authority — could possibly outweigh the costs…Unconditional negotiations aimed at achieving “delayed limited enrichment with maximum safeguards” rather than the failed policy of “zero enrichment” can produce a win-win outcome. Such negotiations won’t be easy to start or conclude, given the parties’ long-held public positions. But if the objective is to ensure that Iran won’t backslide and be newly tempted to go down the nuclear weapons road, this is the only way to go. Flint Leverett, a Senior Research Fellow at the New America Foundation, agrees that a solution like this is the most restrictive that Iran would accept, But, as Iran has developed its enrichment infrastructure over the past several years, a strong consensus seems to have taken hold in Tehran that the Islamic Republic must be allowed to operate at least a pilot enrichment facility as part of an overall settlement.. senior Iranian officials have suggested both publicly and privately that Tehran would be open to constant, “embedded” monitoring of a pilot enrichment plant by the International Atomic Energy Agency…it seems increasingly that this is a genuine Iranian “red line” and that Tehran will not agree to negotiated limits on its nuclear activities without being allowed to operate such a facility. And, while Tehran might be willing to accept terms restricting the development of Iran’s fuel cycle infrastructure beyond a pilot enrichment facility, it will almost certainly not accept such limits without an American security guarantee as part of the agreement. As we discussed previously, U.S. intelligence sources believe Iran has not yet made a decision on whether to acquire nuclear weapons, but with intensive monitoring would be unlikely to try it. Therefore, from an Iranian perspective, this proposal would be extremely tempting. Iranian leaders could go to their people and say that they have “won” because the United States is willing to let them have access to the fuel cycle on their soil. This would fulfill the vision of Iran’s leaders of Iran being an important and proud country in the Middle East. Furthermore, acceptance of a internationally monitored facility would be linked directly with increased economic investment in Iran, including investment in their oil and gas sector. In the same article quoted above, Cirincioni argues that this would create a powerful domestic constituency in Iran that would push to make sure Iran remained in compliance with the strings attached. It’s Good for Iran…But Why Should the US Do It? The main benefit of this proposal is that it provides a real opportunity to find a negotiated solution. Iran has demonstrated that they are not willing to back down on the enrichment issue. A new round of sanctions is unlikely to change that. Unless we find a middle ground, the United States will be forced to accept an Iranian nuclear capability or start another military conflict in the Middle East. However, an internationally monitored facility is not just a way to avoid war, it also solves current concerns with Iran’s nuclear program. First, it could be sold as a political victory -- Obama could say that he has found a way to ensure that Iran has no nuclear weapons program. An international consortium is the one solution that allows both Iranian and American leaders to declare victory, and is therefore the most likely to be accepted by both sides. Second, this proposal would ease proliferation concerns. The facility, while on Iranian soil, would be run in cooperation with the international community. Current IAEA challenge inspections are seen as ineffective because they give Iran too much of an opportunity to divert nuclear fuel to a weapons program, but a permanent IAEA presence would alleviate those concerns. Dr. Geoffrey Forden and Sir John Thomson, who advocate this proposal and have written about it a few times, believe verification would be extremely effective, The IAEA would be consulted on the design of the plant and would operate three forms of safeguards: full-scope, Additional Protocol, and specially agreed transparency measures. Each shift of workers would have a majority of non-Iranians and non-Iranians would hold key positions in the management company. Together, these measures would protect both against diversion of material and against the establishment of a clandestine facility. Other security measures, especially “black boxing” and disabling mechanisms are considered. The risks of an Iranian “breakout” by expropriating the multilaterally owned facility are minor and the risks that the Iranians would and could establish a clandestine facility are, in comparison with other schemes, negligible. If Iran tried to kick the IAEA out or build another nuclear facility somewhere else, it would be a clear indication that Iran was seeking to acquire nuclear weapons, allowing the United States to respond in-kind. Also, just the offer would be a test of Iranian intentions. If Iran said no to a pilot enrichment facility on its soil that would guarantee access to nuclear fuel, the US and the international community could be fairly certain that Iran intended to acquire nuclear weapons.

### Solvency

#### No spillover -- IFRs too costly and take too long

Makhijani 1 (Arjun, PhD in Engineering, President –Institute for Energy and Environmental Research, “Letters to the Editor” Bulletin of Atomic Scientists, May, 57(3), p. 4-5)

As for IFRs, the 1996 National Academy of Sciences (NAS) study cited by Stanford concluded that there were several safety issues that remain to be resolved and that using advanced sodium-cooled reactors for transmutation “would require substantial development, testing, and large-scale demonstration under Nuclear Regulatory Commission safety review and licensing before one could proceed with confidence.” Even if all the technical problems posed by IFRs were to be solved, the **costs of using this technology would be prohibitive**. In the United States alone, IFRs would have to fission roughly 80,000 metric tons of heavy metal (about 99 percent of which is uranium). To transmute this amount of heavy metal over 40 years would require the building of about 2,000 IFRs of 1,000-megawatts capacity each. To manage the worldwide stock of spent fuel (both current and projected) in this way would require roughly four times as many reactors. Even assuming that one IFR reactor was brought on line a week, it would take 150 years to build them. The NAS study also expressed skepticism that the reprocessing technology associated with the IFR could be made as economical as its proponents claim. The IFR requirement of collocating the reprocessing element with the reactor would result in even **higher costs** because of the small scale of collocated plants. NAS's conclusion that there would be a 2 to 7 percent increase in electricity costs was based on low reactor costs and transmutation costs that were “likely to be no less than $50 billion and easily could be over $100 billion” for 600 metric tons of tran-suranics only. If the cost of reprocessing uranium is added, the total cost would increase to $300 billion—$900 billion for the United States alone. It is easy to see why no current transmutation scheme seriously proposes to transmute all the uranium in spent fuel.

#### IFR’s take too long to build

Green, 10 – national nuclear campaigner for Friends of the Earth and a member of the EnergyScience Coalition, PhD in nuclear engineering (Justin, February. , “NUCLEAR WEAPONS, NUCLEAR POWER & INTEGRAL FAST REACTORS,” <http://foe.org.au/sites/default/files/IFR-FoEA-web-Feb2010.pdf>)

Integral fast reactors (IFRs) are reactors proposed to be fuelled with a metallic alloy of uranium and plutonium, with liquid sodium as the coolant. 'Fast' because they would use unmoderated neutrons (as with¶ the better-known fast breeder reactors). 'Integral because they would operate in conjunction with on-site¶ electrolytic 'pyroprocessing' to separate plutonium and¶ other long-lived radioisotopes and to re-irradiate (both¶ as an additional energy source and to convert longlived waste products into shorter-lived, less problematic wastes). **IFRs don't exist and it is unlikely that they will exist any time soon**. For example, South Korea recently announced its intention to embark on a program to assess the economic and technical viability of IFRs by the year 2028. That's the best part of **two decades** –just to assess the concept. In theory, there's lots to like about the IFR concept – e.g. destroying nuclear waste and fissile (weapons) material and producing electricity in the process. In practice, there's every likelihood they would be problematic. Nuclear engineer Dave Lochbaum from the Union of Concerned Scientists has summed up the dilemma: "The IFR looks good on paper. So good, in fact, that we should leave it on paper. For it only gets ugly in moving from blueprint to backyard."

#### **Natural gas blocks investment**

Domenici and Miller 12 (Pete, Senator – New Mexico, and Dr. Warren F., Co-Chair – Nuclear Initiative; Former Assistant Secretary for Nuclear Energy – Department of Energy, “Maintaining U.S. Leadership in Global Nuclear Energy Markets,” Bipartisan Policy Center, July, http://bipartisanpolicy.org/sites/default/files/Leadership%20in%20Nuclear%20Energy%20Markets.pdf)

Prospects for new reactor construction in the United States have constricted significantly in recent years. In the years following passage of EPACT05, 18 utilities applied for combined construction and operating licenses (COLs) to build a total of 28 reactors. 2 In addition, DOE received 19 applications for loan guarantees to support financing for 21 proposed reactors. A combination of factors—including downward revisions to electricity demand projections, difficulty executing the EPACT05 loan guarantee program as intended, and drastically reduced natural gas prices—has put all but two projects on hold. While these projects, comprising four reactors, have received NRC licenses and are currently under construction in Georgia and South Carolina, these plants still face financial, regulatory, and construction challenges. 3 And, though natural gas prices have historically been quite volatile, the ability to tap large shale gas reserves will likely keep natural gas prices sufficiently low to make financing additional new reactor construction very difficult for at least the next decade, if not longer.

#### Lack of nuclear workforce kills solvency

**Retief, 10** – Product Manager, Bentley Systems, Incorporated (Hilmar, December. “Knowledge Management: Solving the Nuclear Industry’s Brain Drain: How to Capture and Manage Your Company’s Institutional Knowledge for Immediate Action.” A Bentley White Paper. http://ftp2.bentley.com/dist/collateral/docs/assetwise/wp\_knowledge-management\_hilmar-retief.pdf)

As the nuclear renaissance takes shape, many organizations in this industry face a shortage of skills and knowledge due to retiring baby boomers. These retirements threaten nuclear facility bottom lines and compromise the safety and reliability of plant operations. The heyday of global nuclear development drew top talent from the best universities and an abundant pool of engineering and nuclear knowledge workers. However, in the United States, there hasn’t been a new nuclear power plant come online since the mid-1980s. This latency in the evolution of nuclear power not only reduced the number of university programs dedicated to nuclear, but also discouraged new engineers from pursuing disciplines in the nuclear field. The global freeze on new nuclear plant development during this same period further limited the amount of new talent entering the industry. Today, the new emphasis on green energy, smaller carbon footprints, and reducing the ecological impact and cost of fossil fuels is reviving the nuclear industry, resulting in more demand for nuclear professionals and an increased awareness of the need to maintain, sustain, and increase the nuclear knowledge base. But the growth of the industry will be impeded unless viable solutions are implemented to capture and apply the knowledge of the existing nuclear workforce. In 2006, the International Atomic Energy Agency (IAEA) published a report titled Risk Management of Knowledge Loss in Nuclear Industry Organizations. The report states that the U.S. is facing a ‘graying’ workforce in which literally half the current workers will reach retirement age within the next five years. And the bad news doesn’t stop there. It goes on to say that, “The lead time required to produce an individual capable of safely operating the complex nuclear systems and technologies may exceed the time frame available until substantial retirement of the existing workforce begins.”

#### Restrictions on nuclear exports block US competitiveness

NEI 12 (Nuclear Energy Institute, “U.S. Nuclear Export Rules Hurt Global Competitiveness,” Winter, http://www.nei.org/resourcesandstats/publicationsandmedia/insight/insightwinter2012/us-nuclear-export-rules-hurt-global-competitiveness/)

Fifty years ago, the United States was the global leader in nuclear technology and services, the first country to harness atoms for peace, and the first to profit from it internationally. Today, U.S. dominance of the global nuclear power market has eroded as suppliers from other countries compete aggressively against American exporters. U.S. suppliers confront competitors that benefit from various forms of state promotion and also must contend with a U.S. government that has not adapted to new commercial realities. The potential is tremendous—$500 billion to $740 billion in international orders over the next decade, representing tens of thousands of potential American jobs, according to the U.S. Department of Commerce. With America suffering a large trade deficit, nuclear goods and services represent a market worth aggressive action. However, **antiquated U.S. government approaches to nuclear exports are** challenging U.S. competitiveness in the nuclear energy market. New federal support is needed if the United States wants to reclaim dominance in commercial nuclear goods and services—and create the jobs that go with them. “The U.S. used to be a monopoly supplier of nuclear materials and technology back in the ’50s and ’60s,” said Fred McGoldrick, former director of the Office of Nonproliferation and Export Policy at the State Department. “That position has eroded to the point where we’re a minor player compared to other countries.” America continues to lead the world in technology innovation and know-how. So what are the issues? And where is the trade? Effective coordination among the many government agencies involved in nuclear exports would provide a boost to U.S. suppliers. “Multiple U.S. agencies are engaged with countries abroad that are developing nuclear power, from early assistance to export controls to trade finance and more,” said Ted Jones, director for supplier international relations at NEI. The challenge is to create a framework that allows commercial nuclear trade to grow while ensuring against the proliferation of nuclear materials. “To compete in such a situation, an ongoing dialogue between U.S. suppliers and government needs to be conducted and U.S. trade promotion must be coordinated at the highest levels,” Jones said. Licensing U.S. Exports Jurisdiction for commercial nuclear export controls is divided among the Departments of Energy and Commerce and the Nuclear Regulatory Commission and has not been comprehensively updated to coordinate among the agencies or to reflect economic and technological changes over the decades. The State Department also is involved in international nuclear commerce. It negotiates and implements so-called “123 agreements” that allow for nuclear goods and services to be traded with a foreign country. The federal agencies often have different, conflicting priorities, leading to a lack of clarity for exporters and longer processing times for export licenses. “The U.S. nuclear export regime is the most complex and restrictive in the world and the least efficient,” said Jones. “Furthermore, it is poorly focused on items and technologies that pose little or no proliferation concern. By trying to protect too much, we risk diminishing the focus on sensitive technologies and handicapping U.S. exports.” A case in point is the Energy Department’s Part 810 regulations. While 123 agreements open trade between the United States and other countries, Part 810 regulates what the United States can trade with another country. For certain countries, it can take more than a year to obtain “specific authorizations” to export nuclear items. Because other supplier countries authorize exports to the same countries with fewer requirements and delays, the Part 810 rules translate into a significant competitive disadvantage for U.S. suppliers.

#### Ignore the hype in their ev – PRISM doesn’t solve the problems with nuclear

Pearce, 12 – an award-winning author and journalist based in London. He has reported on environment, science, and development issues from sixty-seven countries over the past twenty years (Fred, 8/1. “Are fast-breeder reactors a nuclear power panacea?” http://www.energybulletin.net/stories/2012-08-01/are-fast-breeder-reactors-nuclear-power-panacea)

John Sauven, director of Greenpeace UK, and Paul Dorfman, British nuclear policy analyst at the University of Warwick, England, argued recently that this made all nuclear options a poor alternative to renewables in delivering low-carbon energy. “Even if these latest plans could be made to work, **PRISM reactors do nothing to solve the main problems with nuclear: the industry’s repeated failure to build reactors on time and to budget**,” they wrote in a letter to the Guardian newspaper. “We are being asked to wait while an industry that has a track record for very costly failures researches yet another much-hyped but still theoretical new technology.”

#### IFR’s fail and S-PRISM is no exception – they’re not economical

Daryan, 12 – Engineer, expertise: Energy, Sustainablity, Computer Aided Engineering, Renewables technology (Daryan Energy Blog, 4/29. “For nuclear energy supporters hope springs eternal – The Fast Reactor delusion.” http://daryanenergyblog.wordpress.com/2012/04/29/for-nuclear-energy-supporters-hope-springs-eternal-the-fast-reactor-delusion/)

If there’s one thing the nuclear energy supporters aren’t short of its eternal optimism. Like a compulsive gambler, after a string of repeated failures, they’ll still be convinced a “big win” is always right around the corner. Take the situation in the UK. As I pointed out, the collapse of the Horizon Project makes it highly unlikely the UK nuclear industry will succeed in maintaining its existing output, nevermind expand it in any way. In fact they’ve probably left a sizeable hole in the country’s power grid, that will likely be filled by yet more Gas-fired stations ….course it could have been renewables (notably the Severn barrage) if they hadn’t lobbied so fiercely against them….. But instead the UK blogs of nuclear energy supporters have largely filtered out the bad news of the collapse of the Horizon Project and are instead alive with chatter about the S-PRISM reactor which Hitachti are proposing to build at Sellafield. This reactor would be used to consume the UK’s stockpiles of Plutonium and transmute it into a form where it can’t be used for weapons manufacture. However, all the nuclear cheerleaders succeed in doing is demonstrating how little they know about the very thing they are advocating. The 10% reactor As I’ve discussed previously, Fast Reactors, such as the PRISM do not have a brilliant record. Indeed anyone who knew a little more about them would generally try to quickly change the subject whenever someone like me brought the matter up! Many (if not all!) Fast Reactors have run substantially over budget and been built late. Monju (Japan), the world’s most modern took tens year to complete, cost $5.9 Billion, despite its tiny 280 MW output. That’s about $21,000 per installed kW! 3 times the cost of PV at the time of its installation, 8 times the cost at current market prices, and 17 times the installation cost of wind energy! Fast reactors (good history of them here) are also unreliable. The UK’s Dounreary fast reactor was famously known as “the 10% reactor” (discussed in chapter 10 of this book here) as this was its average lifetime capacity factor….and nuclear supporters are forever going on about wind farms and their capacity factor, which are at least three times better than that! Other fast reactors haven’t fared much better with Superphenix managing a 7.79% capacity factor, and Monju (again) has spent most of its life offline for maintenance….maintenance brought on by a set of two leaks of its Sodium coolant which led to fires! This of course brings up the issue of safety, fast reactors have a generally poor safety record. Most notably EBR-1 reactor, which melted down in the US in the 60′s, as did the SRE, and the Fermi-1 (this last accident led to the slightly polemic piece “we almost lost Detroit”). Both Dounreay and SP Superphenix had various accidents and incidents also, which ultimately led to the closure of both plants. Russia’s BN-600 suffered 27 sodium leaks, 14 sodium fires over a 17 year period! Unsurpisingly, the plant was quickly closed after the fall of communism (once Russia got a moderately free press!). Again, this is all not really surprising as a Fast Reactor has to do several things at once that are very technically challenging. The high heat flows and operating temperatures required by fast reactors, plus the need to maintain a high neutron flux, usually means the use of liquid metal coolants like sodium. As this sodium must be kept hot (to avoid it freezing solid) it also needs to be kept away from air or moisture, as it can catch fire in the presence of either (or potentially explode!). This latter point means the heat exchangers, where the sodium transfers its heat to water to make steam, are often a major stumbling block as they tend to be quite complex and maintenance hungry. And that high neutron flux, combined with high temperatures creates problems. As I describe in this chapter, this can lead such a reactor to become vulnerable to creep as well as degradation in material properties due to neutron bombardment. This usually means many key components of fast reactors have to be made out of exotic alloys and in some cases need regular inspection and replacement. Should anyone still not except that fast reactors are uneconomics white elephants, consider the study below, which is very similar to another similar study that was widely circulated in the 70′s. This compared a Fast Reactor to a Heavy Water reactor (an obsolete reactor design I pour scorn on here). Even so, the Heavy water reactor works out as a far more economically viable choice, even given the fairly optimistic variables for a breeder reactor given below. And when I say optimistic, consider that they assume an 80% capacity factor, despite the fact that no fast reactor has ever demonstrated anything like that level of performance. Also you will note that the actually construction costs of the Monju plant are about 16 times higher than the assumed constructions costs for Fast Reactors below…and it still comes out as being more expensive!

### Nuke Leadership

#### No widespread proliferation – no need for leadership

Hymans 12 (Jacques, Associate Professor of International Relations – USC, North Korea's Lessons for (Not) Building an Atomic Bomb, Foreign Affairs, 4-16, www.foreignaffairs.com/articles/137408/jacques-e-c-hymans/north-koreas-lessons-for-not-building-an-atomic-bomb?page=show)

Washington's miscalculation is not just a product of the difficulties of seeing inside the Hermit Kingdom. It is also a result of the broader tendency to overestimate the pace of global proliferation. For decades, Very Serious People have predicted that strategic weapons are about to spread to every corner of the earth. **Such warnings have routinely proved wrong** - for instance, the intelligence assessments that led to the 2003 invasion of Iraq - but they continue to be issued. In reality, despite the diffusion of the relevant technology and the knowledge for building nuclear weapons, the world has been experiencing a great proliferation slowdown. Nuclear weapons programs around the world are taking much longer to get off the ground - and their failure rate is much higher - than they did during the first 25 years of the nuclear age. As I explain in my article "Botching the Bomb" in the upcoming issue of Foreign Affairs, the key reason for the great proliferation slowdown is the absence of strong cultures of scientific professionalism in most of the recent crop of would-be nuclear states, which in turn is a consequence of their poorly built political institutions. In such dysfunctional states, the quality of technical workmanship is low, there is little coordination across different technical teams, and technical mistakes lead not to productive learning but instead to finger-pointing and recrimination. **These problems are debilitating**, and **they cannot be fixed** simply by bringing in more imported parts through illicit supply networks. In short, as a struggling proliferator, North Korea has a lot of company.

#### Prolif will be limited and slow

Yusuf 9 (Moeed, Fellow and Ph.D. Candidate in the Frederick S. Pardee Center for the Study of the Longer-Range

Future – Boston University, “Predicting Proliferation: The History of the Future of Nuclear Weapons”, Brookings Policy Paper 11, January, http://www.brookings.edu/~/media/Files/rc/papers/2009/01\_nuclear\_proliferation\_ yusuf/01\_nuclear\_proliferation\_yusuf.pdf)

It is a paradox that few aspects of international security have been as closely scrutinized, but as incorrectly forecast, as the future nuclear landscape. Since the advent of nuclear weapons in 1945, there have been dozens, if not hundreds of projections by government and independent analysts trying to predict horizontal and vertical proliferation across the world. Various studies examined which countries would acquire nuclear weapons, when this would happen, how many weapons the two superpowers as well as other countries would assemble, and the impact these developments might have on world peace. The results have oscillated between gross underestimations and terrifying overestimations. Following the September 11, 2001 attacks, the fear that nuclear weapons might be acquired by so-called “rogues states” or terrorist groups brought added urgency – and increased difficulty – to the task of accurately assessing the future of nuclear weapons. A survey of past public and private projections provides a timely reminder of the flaws in both the methodologies and theories they employed. Many of these errors were subsequently corrected, but not before, they made lasting impressions on U.S. nuclear (and non-nuclear) policies. This was evident from the time the ‘Atoms for Peace’ program was first promulgated in 1953 to the 1970 establishment of the Nuclear Non- Proliferation Treaty (NPT), and more recently during the post-Cold War disarmament efforts and debates surrounding U.S. stance towards emerging nuclear threats. This study offers a brief survey of attempts to predict the future of nuclear weapons since the beginning of the Cold War.1 The aim of this analysis is not merely to review the record, but to provide an overall sense of how the nuclear future was perceived over the past six decades, and where and why errors were made in prediction, so that contemporary and future predictive efforts have the benefit of a clearer historical record. The survey is based on U.S. intelligence estimates as well as the voluminous scholarly work of American and foreign experts on the subject. Six broad lessons can be gleaned from this history. First, it reveals consistent misjudgments regarding the extent of nuclear proliferation. Overall, projections were far more pessimistic than actual developments; those emanating from independent experts more so than intelligence estimates. In the early years of the Cold War, the overly pessimistic projections stemmed, in part, from an incorrect emphasis on technology as the driving factor in horizontal proliferation, rather than intent, a misjudgment, which came to light with the advent of a Chinese bomb in 1964. The parallel shift from developed-world proliferation to developing-world proliferation was accompanied by greater alarm regarding the impact of proliferation. It was felt that developing countries were more dangerous and irresponsible nuclear states than developed countries. Second, while all the countries that did eventually develop nuclear weapons were on the lists of suspect states, the estimations misjudged when these countries would go nuclear. The Soviet Union went nuclear much earlier than had been initially predicted, intelligence estimates completely missed China’s nuclear progress, and India initially tested much later than U.S. intelligence projections had anticipated and subsequently declared nuclear weapon status in 1998 when virtually no one expected it to do so. Third, the pace of proliferation has been consistently slower than has been anticipated by most experts due to a combination of overwhelming alarmism, the intent of threshold states, and many incentives to abstain from weapons development. In the post-Cold War period, the number of suspected threshold states has gradually decreased and the geographical focus has shifted solely to North-East Asia, South Asia, and the Middle East. There is also much greater concern that a nuclear chain reaction will break out than was the case during the Cold War.

#### Nuke leadership fails – it’s an ineffective tool and outdated

Weiss 9 (Leonard, Affiliated Scholar – Stanford University's Center for International Security and Cooperation, “Reliable Energy Supply and Nonproliferation,” Nonproliferation Review, 16(2), July, http://cns.miis.edu/npr/pdfs/npr\_16-2\_weiss.pdf)

Part of the problem is that its value as a nonproliferation tool was at its height at the beginning of the nuclear age**,** when few countries were in a position to achieve nuclear autarky. The probability of consensus on establishing a worldwide regime in which there are fuel guarantees and no nationally owned fuel cycle facilities has been on a decreasing slope. Technology denial has become a less effective tool, thanks especially to A.Q. Khan and others. The spread of fuel cycle technologies has perhaps reached a tipping point in which the technology is**,** if not widely available, then sufficiently available to any determined party**.** Hence, the argument made by proponents of internationalization that giving up national nuclear development in favor of more restrictive international efforts will result in much greater security for all does not have the power it may once have had.

#### IFR’s cause prolif

Lovins 9 (Amory B., Chair and Chief Scientist – Rocky Mountain Institute, “’New’ Nuclear Reactors: Same Old Story,” Nuclear Monitor 690, 6-26, http://www.nirs.org/factsheets/lovinsonifretc.pdf)

As this becomes evident, other kinds of reactors are being proposed instead--novel designs that claim to solve LWRs’ problems of economics, proliferation, and waste. Even climate-protection pioneer Jim Hansen says these “Generation IV” reactors merit rapid R&D. But on closer examination, the two kinds most often promoted -Integral Fast Reactors (IFRs) and thorium reactors--reveal no economic, environmental, or security rationale, and the thesis is unsound for any nuclear reactor. Integrated Fast Reactors (IFRs) The IFR--a pool-type, liquid-sodium cooled fast-neutron reactor plus an ambitious new nuclear fuel cycle--was abandoned in 1994, and General Electric’s S-PRISM design in 2003, due to both proliferation concerns and dismal economics. Federal funding for fast breeder reactors halted in 1983, but in the past few years, enthusiasts got renewed Bush Administration support by portraying the IFR as a solution to proliferation and nuclear waste. It’s neither. Fast reactors were first offered as a way to make more plutonium to augment and ultimately replace scarce uranium. Now that uranium and enrichment are known to get cheaper while reprocessing, cleanup, and nonproliferation get costlier--destroying the economic rationale--IFRs have been reframed as a way to destroy the plutonium (and similar transuranic elements) in long-lived radioactive waste. Two or three redesigned IFRs could in principle fission the plutonium produced by each four LWRs without making more net plutonium. However, most LWRs will have retired before even one commercialsize IFR could be built; LWRs won’t be replaced with more LWRs because they’re grossly uncompetitive; and IFRs with their fuel cycle would cost even more and probably be less reliable. It is feasible today to “burn” plutonium in LWRs, but this isn’t done much because it’s very costly, makes each kg of spent fuel 7x hotter, enhances risks, and makes certain transuranic isotopes that complicate operation. IFRs could do the same thing with similar or greater problems, offering no advantage over LWRs in proliferation resistance, cost, or environment. IFRs’ reprocessing plant, lately reframed a “recycling center,” would be built at or near the reactors, coupling them so neither works without the other. Its novel technology, re-placing solvents and aqueous chemistry with high-temperature pyrometallurgy and electro refining, would incur different but major challenges, greater technical risks and repair problems, and speculative but probably worse economics. (Argonne National Laboratory, the world’s experts on it, contracted to pyroprocess spent fuel from the EBRII--a small IFR-like test reactor shut down in 1994 --by 2035, at a cost DOE estimated in 2006 at approximately 50× today’s cost of fresh LWR fuel.) Reprocessing of any kind makes waste management more difficult and complex, increases the volume and diversity of waste streams, increases by several--to manifold the cost of nuclear fueling, and separates bomb-usable material that can’t be adequately measured or protected. Mainly for this last reason, all U.S. Presidents since Gerald Ford in 1976 (except G.W. Bush in 2006–08) discouraged it. An IFR/pyroprocessing system would give any country immediate access to over a thousand bombs’ worth of plutonium to fuel it, facilities to recover that plutonium, and experts to separate and fabricate it into bomb cores--hardly a path to a safer world.

#### Can’t solve Israel- their evidence says strike in 2013- too soon to solve

#### No Israel strike

Rubin, 2012 – professor at the Interdisciplinary Center in Herzliya, Israel, the Director of the Global Research and International Affairs (GLORIA) Center, and a Senior Fellow at the International Policy Institute for Counterterrorism (Barry, “Israel Isn’t Going to Attack Iran and Neither Will the United States.” http://pjmedia.com/barryrubin/2012/01/26/israel-is-not-about-to-attack-iran-and-neither-is-the-united-states-get-used-to-it/)

The radio superhero The Shadow had the power to “cloud men’s minds.” But nothing clouds men’s minds like anything that has to do with Jews or Israel. This year’s variation on that theme is the idea that Israel is about to attack Iran. Such a claim repeatedly appears in the media. Some have criticized Israel for attacking Iran and turning the Middle East into a cauldron of turmoil (not as if the region needs any help in that department) despite the fact that it hasn’t even happened. On the surface, of course, there is apparent evidence for such a thesis. Israel has talked about attacking Iran and one can make a case for such an operation. Yet any serious consideration of this scenario — based on actual research and real analysis rather than what the uninformed assemble in their own heads or Israeli leaders sending a message to create a situation where an attack isn’t necessary — is this: It isn’t going to happen. Indeed, the main leak from the Israeli government, by an ex-intelligence official who hates Prime Minister Benjamin Netanyahu, has been that the Israeli government already decided not to attack Iran. He says that he worries this might change in the future but there’s no hint that this has happened or will happen. Defense Minister Ehud Barak has publicly denied plans for an imminent attack as have other senior government officials. Of course, one might joke that the fact that Israeli leaders talk about attacking Iran is the biggest proof that they aren’t about to do it. But Israel, like other countries, should be subject to rational analysis. Articles written by others are being spun as saying Israel is going to attack when that’s not what they are saying. I stand by my analysis and before December 31 we will see who was right. I’m not at all worried about stating very clearly that Israel is not going to go to war with Iran. So why are Israelis talking about a potential attack on Iran’s nuclear facilities? Because that’s a good way – indeed, the only way Israel has — to pressure Western countries to work harder on the issue, to increase sanctions and diplomatic efforts. If one believes that somehow pushing Tehran into slowing down or stopping its nuclear weapons drive is the only alternative to war, that greatly concentrates policymakers’ minds. Personally, I don’t participate — consciously or as an instrument — in disinformation campaigns, even if they are for a good cause. Regarding Ronen Bergman’s article in the New York Times, I think the answer is simple: Israeli leaders are not announcing that they are about to attack Iran. They are sending a message that the United States and Europe should act more decisively so that Israel does not feel the need to attack Iran in the future. That is a debate that can be held but it does not deal with a different issue: Is Israel about to attack Iran? The answer is “no.”

#### No impact to peak uranium – card just vaguely references nuclear weapons saying "someone might be tempted" – peak resources probably cause coop, not tension

#### Ocean mining solves

White, 12 – Media Relations Specialist for the Pacific Northwest National Laboratory (Frances, 8/21. “Fueling nuclear power with seawater.” http://www.pnnl.gov/news/release.aspx?id=938)

When you take a dip in the ocean, nuclear fuel is probably the farthest thing from your mind. Uranium floats in Earth's oceans in trace amounts of just 3 parts per billion, but it adds up. Combined, our oceans hold up to 4.5 billion tons of uranium - enough to potentially fuel the world's nuclear power plants for 6,500 years. Countries such as Japan have examined the ocean as a uranium source since the 1960s, but previous approaches have been too expensive to extract the quantities needed for nuclear fuel. Now researchers at the Department of Energy's Pacific Northwest National Laboratory and Oak Ridge National Laboratory are tweaking one of those concepts with the goal of making it more efficient and cost-competitive. The research is being done for the Department of Energy's Office of Nuclear Energy. Japan developed an adsorbent that attaches the uranium-loving chemical group amidoxime to a plastic polymer. ORNL examined the binding process between the plastic and chemical groups and used that knowledge to enhance the uranium-grabbing characteristic of the amidoxime groups on the adsorbent material's surface. PNNL tested the adsorbent's performance at its Marine Sciences Laboratory in Sequim, Wash., DOE's only marine research facility. Using filtered seawater from nearby Sequim Bay, PNNL established a laboratory testing process to measure the effectiveness of both Japan's and ORNL's adsorbent materials. Initial tests showed ORNL's adsorbent can soak up more than two times the uranium than the material from Japan.

#### IFR’s don’t solve it

McKillop, 11 – former expert in policy and programming with the European Commission in Brussels (Andrew, 4/14. “Peak Uranium - And Other Threats To Nuclear Power.” http://www.marketoracle.co.uk/Article27549.html)

The Achilles heel of uranium shortage has mothered a host of imaginative, but unworkable solutions, or claimed solutions to the problem. New technologies such as fast-fission breeder reactors generating more plutonium fuel than they consume, nuclear fusion machines (also heavily criticized by Michael Dittmar), thorium reactors which are particularly promoted by India, and underground 'build and forget' reactors are among the many quick fix solutions on offer. A large number of nuclear experts are pessimistic about fast breeders. In the words of Dittmar: “Their huge construction costs, their poor safety records and their inefficient performance give little reason to believe that they will ever become commercially significant,”. To this we can add that the environmental, human health, and weapons proliferation implications of building up massive national stockpiles of plutonium would be extreme, in the event of the so-called “plutonium economy” ever coming about.

#### No impact to terror

Mueller and Stewart 12 [John Mueller is Senior Research Scientist at the Mershon Center for International Security Studies and Adjunct Professor in the Department of Political Science, both at Ohio State University, and Senior Fellow at the Cato Institute in Washington, D.C. Mark G. Stewart is Australian Research Council Professorial Fellow and Professor and Director at the Centre for Infrastructure Performance and Reliability at the University of Newcastle in Australia, “The Terrorism Delusion”, International Security, Vol. 37, No. 1 (Summer 2012), pp. 81–110, Chetan]

It seems increasingly likely that the official and popular reaction to the terrorist attacks of September 11, 2001, has been substantially deluded—massively disproportionate to the threat that al-Qaida has ever actually presented either as an international menace or as an inspiration or model to homegrown amateurs. Applying the extensive datasets on terrorism that have been generated over the last decades, we conclude that the chances of an American perishing at the hands of a terrorist at present rates is one in 3.5 million per year—well within the range of what risk analysts hold to be “acceptable risk.”40 Yet, despite the importance of responsibly communicating risk and despite the costs of irresponsible fearmongering, just about the only official who has ever openly put the threat presented by terrorism in some sort of context is New York’s Mayor Michael Bloomberg, who in 2007 pointed out that people should “get a life” and that they have a greater chance of being hit by lightning than of being a victim of terrorism—an observation that may be a bit off the mark but is roughly accurate.41 (It might be noted that, despite this unorthodox outburst, Bloomberg still managed to be re-elected two years later.) Indeed, much of the reaction to the September 11 attacks calls to mind Hans Christian Andersen’s fable of delusion, “The Emperor’s New Clothes,” in which con artists convince the emperor’s court that they can weave stuffs of the most beautiful colors and elaborate patterns from the delicate silk and purest gold thread they are given. These stuffs, they further convincingly explain, have the property of remaining invisible to anyone who is unusually stupid or unfit for office. The emperor finds this quite appealing because not only will he have splendid new clothes, but he will be able to discover which of his officials are unfit for their posts—or in today’s terms, have lost their effectiveness. His courtiers, then, have great professional incentive to proclaim the stuffs on the loom to be absolutely magnificent even while mentally justifying this conclusion with the equivalent of “absence of evidence is not evidence of absence.” Unlike the emperor’s new clothes, terrorism does of course exist. Much of the reaction to the threat, however, has a distinctly delusionary quality. In Carle’s view, for example, the CIA has been “spinning in self-referential circles” in which “our premises were flawed, our facts used to fit our premises, our premises determined, and our fears justified our operational actions, in a self-contained process that arrived at a conclusion dramatically at odds with the facts.” The process “projected evil actions where there was, more often, muddled indirect and unavoidable complicity, or not much at all.” These “delusional ratiocinations,” he further observes, “were all sincerely, ardently held to have constituted a rigorous, rational process to identify terrorist threats” in which “the avalanche of reporting confirms its validity by its quantity,” in which there is a tendency to “reject incongruous or contradictory facts as erroneous, because they do not conform to accepted reality,” and in which potential dissenters are not-so-subtly reminded of career dangers: “Say what you want at meetings. It’s your decision. But you are doing yourself no favors.”42 Consider in this context the alarming and profoundly imaginary estimates of U.S. intelligence agencies in the year after the September 11 attacks that the number of trained al-Qaida operatives in the United States was between 2,000 and 5,000.43 Terrorist cells, they told reporters, were “embedded in most U.S. cities with sizable Islamic communities,” usually in the “run-down sections,” and were “up and active” because electronic intercepts had found some of them to be “talking to each other.”44 Another account relayed the view of “experts” that Osama bin Laden was ready to unleash an “11,000 strong terrorist army” operating in more than sixty countries “controlled by a Mr. Big who is based in Europe,” but that intelligence had “no idea where thousands of these men are.”45 Similarly, FBI Director Robert Mueller assured the Senate Intelligence Committee on February 11, 2003, that, although his agency had yet to identify even one al-Qaida cell in the United States, “I remain very concerned about what we are not seeing,” a sentence rendered in bold lettering in his prepared text. Moreover, he claimed that such unidentified entities presented “the greatest threat,” had “developed a support infrastructure” in the country, and had achieved both the “ability” and the “intent” to inflict “signi ficant casualties in the US with little warning.”46 Over the course of time, such essentially delusionary thinking has been internalized and institutionalized in a great many ways. For example, an extrapolation of delusionary proportions is evident in the common observation that, because terrorists were able, mostly by thuggish means, to crash airplanes into buildings, they might therefore be able to construct a nuclear bomb. Brian Jenkins has run an internet search to discover how often variants of the term “al-Qaida” appeared within ten words of “nuclear.” There were only seven hits in 1999 and eleven in 2000, but the number soared to 1,742 in 2001 and to 2,931 in 2002.47 By 2008, Defense Secretary Robert Gates was assuring a congressional committee that what keeps every senior government leader awake at night is “the thought of a terrorist ending up with a weapon of mass destruction, especially nuclear.”48 Few of the sleepless, it seems, found much solace in the fact that an al-Qaida computer seized in Afghanistan in 2001 indicated that the group’s budget for research on weapons of mass destruction (almost all of it focused on primitive chemical weapons work) was $2,000 to $4,000.49 In the wake of the killing of Osama bin Laden, officials now have many more al-Qaida computers, and nothing in their content appears to suggest that the group had the time or inclination, let alone the money, to set up and staff a uranium-seizing operation, as well as a fancy, super-high-technology facility to fabricate a bomb. This is a process that requires trusting corrupted foreign collaborators and other criminals, obtaining and transporting highly guarded material, setting up a machine shop staffed with top scientists and technicians, and rolling the heavy, cumbersome, and untested finished product into position to be detonated by a skilled crew—all while attracting no attention from outsiders.50 If the miscreants in the American cases have been unable to create and set off even the simplest conventional bombs, it stands to reason that none of them were very close to creating, or having anything to do with, nuclear weapons—or for that matter biological, radiological, or chemical ones. In fact, with perhaps one exception, none seems to have even dreamed of the prospect; and the exception is José Padilla (case 2), who apparently mused at one point about creating a dirty bomb—a device that would disperse radiation—or even possibly an atomic one. His idea about isotope separation was to put uranium into a pail and then to make himself into a human centrifuge by swinging the pail around in great arcs.51 Even if a weapon were made abroad and then brought into the United States, its detonation would require individuals in-country with the capacity to receive and handle the complicated weapons and then to set them off. Thus far, the talent pool appears, to put mildly, very thin.

### Warming

#### No water wars – empirics are on our side

Allouche 11 (Jeremy Allouche 11 is currently a Research Fellow at the Institute of Development Studies at the University of Sussex. "The sustainability and resilience of global water and food systems: Political analysis of the interplay between security, resource scarcity, political systems and global trade" Food PolicyVolume 36, Supplement 1, January 2011, Pages S3-S8 Accessed via: Science Direct Sciverse)

The question of resource scarcity has led to many debates on whether scarcity (whether of food or water) will lead to conflict and war. The underlining reasoning behind most of these discourses over food and water wars comes from the Malthusian belief that there is an imbalance between the economic availability of natural resources and population growth since while food production grows linearly, population increases exponentially. Following this reasoning, neo-Malthusians claim that finite natural resources place a strict limit on the growth of human population and aggregate consumption; if these limits are exceeded, social breakdown, conflict and wars result. Nonetheless, it seems that most empirical studies do not support any of these neo-Malthusian arguments. Technological change **and greater inputs of capital** have **dramatically increased labour productivity in agriculture.** More generally, the neo-Malthusian view has suffered because during the last two centuries **humankind has breached many resource barriers that seemed unchallengeable**.¶ Lessons from history: alarmist scenarios, resource wars and international relations¶ In a so-called age of uncertainty, a number of alarmist scenarios have linked the increasing use of water resources and food insecurity with wars. The idea of water wars (perhaps more than food wars) is a dominant discourse in the media (see for example Smith, 2009), NGOs (International Alert, 2007) and within international organizations (UNEP, 2007). In 2007, UN Secretary General Ban Ki-moon declared that ‘water scarcity threatens economic and social gains and is a potent fuel for wars and conflict’ (Lewis, 2007). Of course, this type of discourse has an **instrumental purpose**; security and conflict are here used for raising water/food as key policy priorities at the international level.¶ In the Middle East, presidents, prime ministers and foreign ministers have also used this bellicose rhetoric. Boutrous Boutros-Gali said; ‘the next war in the Middle East will be over water, not politics’ (Boutros Boutros-Gali in Butts, 1997, p. 65). The question is not whether the sharing of transboundary water sparks political tension and alarmist declaration, but rather to what extent water has been a principal factor in international conflicts. The evidence seems quite weak. Whether by president Sadat in Egypt or King Hussein in Jordan, none **of these declarations have been followed up by military action**.¶ The governance of transboundary water has gained increased attention these last decades. This has a direct impact on the global food system as water allocation agreements determine the amount of water that can used for irrigated agriculture. The likelihood of conflicts over water is an important parameter to consider in assessing the stability, sustainability and resilience of global food systems.¶ None **of the** various and extensive databases on the causes of war show water as a casus belli. Using the International Crisis Behavior (ICB) data set and supplementary data from the University of Alabama on water conflicts, Hewitt, Wolf and Hammer found only seven disputes where water seems to have been at least a partial cause for conflict (Wolf, 1998, p. 251). In fact, about 80% of the incidents relating to water were limited purely to governmental rhetoric intended for the electorate (Otchet, 2001, p. 18).¶ As shown in The Basins At Risk (BAR) water event database, **more than two-thirds of over 1800 water-related ‘events’ fall on the ‘cooperative’ scale** (Yoffe et al., 2003). Indeed, if one takes into account a much longer period, the following figures clearly demonstrate this argument. According to studies by the United Nations Food and Agriculture Organization (FAO), organized political bodies signed between the year 805 and 1984 more than 3600 water-related treaties, and approximately 300 treaties dealing with water management or allocations in international basins have been negotiated since 1945 ([FAO, 1978] and [FAO, 1984]).¶ The fear around water wars have been driven by a Malthusian outlook which equates scarcity with violence, conflict and war. There is however **no direct correlation between water scarcity and transboundary conflict**. Most specialists now tend to agree that the major issue is not scarcity per se but rather the allocation of water resources between the different riparian states (see for example [Allouche, 2005], [Allouche, 2007] and [Rouyer, 2000]). Water rich countries have been involved in a number of disputes with other relatively water rich countries (see for example India/Pakistan or Brazil/Argentina). The perception of each state’s estimated water needs really constitutes the core issue in transboundary water relations. Indeed, whether this scarcity exists or not in reality, perceptions of the amount of available water shapes people’s attitude towards the environment (Ohlsson, 1999). In fact, some water experts have argued that scarcity drives the process of co-operation among riparians ([Dinar and Dinar, 2005] and [Brochmann and Gleditsch, 2006]).¶ In terms of international relations, the threat of water wars due to increasing scarcity **does not make much sense in the light of the recent** historical record. Overall, the water war rationale expects conflict to occur over water, and appears to suggest that violence is a viable means of securing national water supplies, an argument which is highly contestable.¶ The debates over the likely impacts of climate change have again popularised the idea of water wars. The argument runs that climate change will precipitate worsening ecological conditions contributing to resource scarcities, social breakdown, institutional failure, mass migrations and in turn cause greater political instability and conflict ([Brauch, 2002] and [Pervis and Busby, 2004]). In a report for the US Department of Defense, Schwartz and Randall (2003) speculate about the consequences of a worst-case climate change scenario arguing that water shortages will lead to aggressive wars (Schwartz and Randall, 2003, p. 15). Despite growing concern that climate change will lead to instability and violent conflict, **the evidence base to substantiate the connections is thin** ([Barnett and Adger, 2007] and [Kevane and Gray, 2008]).

#### No acidification—negligible pH change and animal response

NIPCC 10 (Nongovernmental International Panel on Climate Change, multi-national scientific coalition comprised of leading climate scientists, “Speculations beyond the Scope of Reality,” http://www.nipccreport.org/articles/2010/may/05may2010a1.html, AM)

In the introductory material to their paper on potential effects of predicted near-future increases in CO2-driven ocean acidification on shell-producing calcification in a certain species of oyster, Watson et al. (2009) report that over the past two centuries, CO2 emissions from deforestation and the burning of fossil fuels have increased atmospheric CO2 concentrations from 280 to 380 ppm, citing NOAA/ESRL records produced and maintained by Pieter Tans. They additionally say that the portion of this extra CO2 that has been taken up by the planet's oceans has caused a 0.1 unit drop in the pH of their surface waters, which would appear to be correct. However, they predict there will be a further reduction in ocean pH of 0.3 to 0.5 units by 2100, citing the work of Haugan and Drange (1996), Orr et al. (2005) and Caldeira and Wickett (2005), while noting that these predicted changes in ocean pH "are not only greater but far more rapid than any experienced in the last 24 million years," citing Blackford and Gilbert (2007), or "possibly the last 300 million years," citing Caldeira and Wickett (2003). But how likely are such predictions? Consider the findings of Tans himself, who Watson et al. approvingly cite in regard to the CO2 history they mention. In a paper published inOceanography, Tans (2009) concluded that the future trajectory of oceanic pH will likely be significantly different from that suggested by the scientists cited by Watson et al., while at the same time bravely criticizing the IPCC reports that have also accepted the highly inflated acidification predictions of those scientists. Indeed, whereas Watson et al. and the IPCC accept the claims of those who project a decline in pH somewhere in the range of 0.3 to 0.5 between now and the end of the century, Tans' projections yield a pH decline somewhere in the range of 0.09 to 0.17, which is much smaller, and which would be expected to have significantly reduced biological impacts compared to those suggested by the experimental work of Watson et al. for that future point in time. Based on the results of their experiments and the maximum decline in ocean-water pH that they accept, for example, Watson et al. predict a significantdecline of 72% in Sydney rock oyster (Saccostrea glomerata) larval survival by the year 2100. However, utilizing Watson et al.'s data, but with the maximum ocean-water pH decline calculated by Tans, one obtains a non-significant larval survival decline of only 14%, based on interpolation of the graphical results portrayed in Watson et al.'s paper. In like manner, similar assessments of changes in antero-posterior measurement yield asignificant decline of 8.7% using Watson et al.'s assumptions about ocean pH, but a non-significant decline of only 1.8% according to Tans' pH calculations. Corresponding results for dorso-ventral measurement were a significant decline of 7.5% with Watson et al.'s pH values, but a non-significant decline of only 1.5% with Tans' values; while for larval dry mass there was a decline of 50% in Watson et al.'s analysis, but an actualincrease (albeit non-significant) of 6% using Tans' pH analysis. Last of all, for empty shells remaining there was a significant decline of 90% in the Watson et al. study, but a non-significant decline of only 6% when Tans' pH projections were used. In summation, based on their experimental data and the ocean pH projections for the end of the century that are promoted by them and the IPCC, Watson et al. find what they characterize as "a dramatic negative effect on the survival, growth, and shell formation of the early larval stages of the Sydney rock oyster." On the other hand, employing the pH values projected by Tans, there are no statistically significant reductions in any of the five biological parameters measured and evaluated by Watson et al., which is an amazingly benign response to an environmental threat that is being suggested by some to be more serious or extreme than it was at any other time that it may have reared its ugly head over the past 300 million years!

#### Ocean’s resilient

Dulvy et al in ‘3

(Nicholas, (School of Marine Science and Tech. @ U. Newcastle), Yvonne Sadovy, (Dept. Ecology and Biodiversity @ U. Hong Kong), and John D. Reynolds, (Centre for Ecology, Evolution and Conservation @ School of Bio. Sci. @ U. East Anglia), Fish and Fisheries, “Extinction vulnerability in marine populations”, 4:1, Blackwell-Synergy)

Marine fish populations are more variable and resilient than terrestrial populations Great natural variability in population size is sometimes invoked to argue that IUCN Red List criteria, as one example, are too conservative for marine fishes (Hudson and Mace 1996; Matsuda et al. 1997; Musick 1999; Powles et al. 2000; Hutchings 2001a). For the (1996) IUCN list, a decline of 20% within 10 years or three generations (whichever is longer) triggered a classification of 'vulnerable', while declines of 50 and 80% led to classifications of 'endangered' and 'critically endangered', respectively. These criteria were designed to be applied to all animal and plant taxa, but many marine resource biologists feel that for marine fishes 'one size does not fit all' (see Hutchings 2001a). They argue that percent decline criteria are too conservative compared to the high natural variability of fish populations. Powles et al. (2000) cite the six-fold variation of the Pacific sardine population (Sardinops sagax, Clupeidae) and a nine-fold variation in northern anchovy (Engraulis mordax, Clupeidae) over the past two millennia to suggest that rapid declines and increases of up to 10-fold are relatively common in exploited fish stocks. It should, however, be borne in mind that the variation of exploited populations must be higher than unexploited populations because recruitment fluctuations increasingly drive population fluctuations when there are few adults (Pauly et al. 2002).

#### **No resource wars**

Pinker 11 (Steven, Harvard College Professor and Johnstone Family Professor in the Department of Psychology – Harvard University, “The Better Angels of Our Nature: Why Violence Has Declined,” Google Books)

Once again it seems to me that the appropriate response is "maybe, but maybe not." Though climate change can cause plenty of misery and deserves to be mitigated for that reason alone, it will not necessarily lead to armed conflict. The political scientists who track war and peace, such as Halvard Buhaug, Idean Salehyan, Ole Theisen, and Nils Gleditsch, are skeptical of the popular idea that people fight wars over scarce resources. Hunger and resource shortages are tragically common in sub-Saharn countries such as Malawi, Zambia, and Tanzania, **but wars involving them are not**. Hurricanes, floods, droughts, and tsunamis (such as the disastrous one in the Indian Ocean in 2004) do not generally lead to armed conflict. The American dust bowl in the 1930s, to take another example, caused plenty of deprivation but no civil war. And while temperatures have been rising steadily in Africa during the past fifteen years, civil wars and war deaths have been falling. Pressures on access to land and water can certainly cause local skirmishes, but a genuine war requires that hostile forces be organized and armed, and that depends more on the influence of bad governments, closed economies, and militant ideologies than on the sheer availability of land and water. Certainly any connection to terrorism is in the imagination of the terror warriors: terrorists tend to be underemployed lower-middle-class men, not subsistence farmers. As for genocide, the Sudanese government finds it convenient to blame violence in Darfur on desertification, distracting the world from its own role in tolerating or encouraging the ethnic cleansing. In a regression analysis on armed conflicts from 1980 to 1992, Theisen found that conflict was more likely if a country was poor, populous, politically unstable, and abundant in oil, but not if it had suffered from droughts, water shortages, or mild land degradation. (Severe land degradation did have a small effect.) Reviewing analyses that examined a large number (N) of countries rather than cherry-picking one or two, he concluded, "those who foresee doom, because of the relationship between resource scarcity and violent internal conflict, have very little support in the large-N literature." Salehyan adds that relatively inexpensive advances in water use and agriculture practices in the developing world can yield massive increases in productivity with a constant or even shrinking amount of land, and that better governance can mitigate the human costs of environmental damage, as it does in developed democracies. Since the state of the environment is at most one ingredient in a mixture that depends far more on political and social organization, resource wars are far from inevitable, even in a climate-changed world.

#### Plan Doesn’t solve warming

Green 9 (Dr. Jim, Senior Vice President for Resource Development – United Way of the Greater Triangle, “Nuclear Weapons and 'Fourth Generation' Reactors,” Friends of the Earth Australia, July, http://www.foe.org.au/anti-nuclear/issues/nfc/power-weapons/g4nw)

'Integral fast reactors' and other 'fourth generation' nuclear power concepts have been gaining attention, in part because of comments by US climate scientist James Hansen. While not a card-carrying convert, Hansen argues for more research: "We need hard-headed evaluation of how to get rid of long-lived nuclear waste and minimize dangers of proliferation and nuclear accidents. Fourth generation nuclear power seems to have the potential to solve the waste problem and minimize the others." Others are less circumspect, with one advocate of integral fast reactors promoting them as the "holy grail" in the fight against global warming. There are two main problems with these arguments. Firstly, nuclear power could at most make a modest contribution to climate change abatement, mainly because it is used almost exclusively for electricity generation which accounts for about one-quarter of global greenhouse emissions. Doubling global nuclear power output (at the expense of coal) would reduce greenhouse emissions by about 5%. Building six nuclear power reactors in Australia (at the expense of coal) would reduce Australia's emissions by just 4%.

#### Warming is irreversible

ANI 10 (“IPCC has underestimated climate-change impacts, say scientists”, 3-20, One India, http://news.oneindia.in/2010/03/20/ipcchas-underestimated-climate-change-impacts-sayscientis.html)

According to Charles H. Greene, Cornell professor of Earth and atmospheric science, "Even if all man-made greenhouse gas emissions were stopped tomorrow and carbon-dioxide levels stabilized at today's concentration, by the end of this century, the global average temperature would increase by about 4.3 degrees Fahrenheit, or about 2.4 degrees centigrade above pre-industrial levels, which is significantly above the level which scientists and policy makers agree is a threshold for dangerous climate change." "Of course, greenhouse gas emissions will not stop tomorrow, so the actual temperature increase will likely be significantly larger, resulting in potentially catastrophic impacts to society unless other steps are taken to reduce the Earth's temperature," he added. "Furthermore, while the oceans have slowed the amount of warming we would otherwise have seen for the level of greenhouse gases in the atmosphere, the ocean's thermal inertia will also slow the cooling we experience once we finally reduce our greenhouse gas emissions," he said. This means that the temperature rise we see this century will be largely irreversible for the next thousand years. "Reducing greenhouse gas emissions alone is unlikely to mitigate the risks of dangerous climate change," said Green.

#### Long timeframe and adaptation solves

Robert O. Mendelsohn 9, the Edwin Weyerhaeuser Davis Professor, Yale School of Forestry and Environmental Studies, Yale University, June 2009, “Climate Change and Economic Growth,” online: http://www.growthcommission.org/storage/cgdev/documents/gcwp060web.pdf

The heart of the debate about climate change comes from a number of warnings from scientists and others that give the impression that human-induced climate change is an immediate threat to society (IPCC 2007a,b; Stern 2006). Millions of people might be vulnerable to health effects (IPCC 2007b), crop production might fall in the low latitudes (IPCC 2007b), water supplies might dwindle (IPCC 2007b), precipitation might fall in arid regions (IPCC 2007b), extreme events will grow exponentially (Stern 2006), and between 20–30 percent of species will risk extinction (IPCC 2007b). Even worse, there may be catastrophic events such as the melting of Greenland or Antarctic ice sheets causing severe sea level rise, which would inundate hundreds of millions of people (Dasgupta et al. 2009). Proponents argue there is no time to waste. Unless greenhouse gases are cut dramatically today, economic growth and well‐being may be at risk (Stern 2006).

These statements are largely alarmist and misleading. Although climate change is a serious problem that deserves attention, society’s immediate behavior has an extremely low probability of leading to catastrophic consequences. The science and economics of climate change is quite clear that emissions over the next few decades will lead to only mild consequences. The severe impacts predicted by alarmists require a century (or two in the case of Stern 2006) of no mitigation. Many of the predicted impacts assume there will be no or little adaptation. The net economic impacts from climate change over the next 50 years will be small regardless. Most of the more severe impacts will take more than a century or even a millennium to unfold and many of these “potential” impacts will never occur because people will adapt. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long‐range climate risks. What is needed are long‐run balanced responses.

**Warming is slowing – ocean currents**

**Science Daily 8** (“Will Global Warming Take A Short Break? Improved Climate Predictions Suggest A Reduced Warming Trend During The Next 10 Years”, 5-5, http://www.sciencedaily.com/releases/2008/05/080502113749.htm)

To date climate change projections, as published in the last IPCC report, only considered changes in future atmospheric composition. This strategy is appropriate for long-term changes in climate such as predictions for the end of the century. However, in order to predict short-term developments over the next decade, models need additional information on natural climate variations, in particular associated with **ocean currents**. Lack of sufficient data has hampered such predictions in the past. Scientists at IFM-GEOMAR and from the MPI for Meteorology have developed a method to derive ocean currents from measurements of sea surface temperature (SST). The latter are available in good quality and global coverage at least for the past 50 years. With this additional information, natural decadal climate variations, which are superimposed on the long-term anthropogenic warming trend, can be predicted. The improved predictions suggest that global **warming will weaken** slightly during the **following 10 years.** “Just to make things clear: we are not stating that anthropogenic climate change won’t be as bad as previously thought”, explains Prof. Mojib Latif from IFM-GEOMAR. “What we are saying is that on top of the warming trend there is a long-periodic oscillation that will probably lead to a to a **lower temperature increase** than we would expect from the current trend during the next years”, adds Latif. “That is like driving from the coast to a mountainous area and crossing some hills and valleys before you reach the top”, explains Dr. Johann Jungclaus from the MPI for Meteorology. “In some years trends of both phenomena, the anthropogenic climate change and the natural decadal variation will add leading to a much stronger temperature rise.”

#### Can’t solve developing countries

**Socolow and Glaser, 9** – Professor of Mechanical and Aerospace Engineering at Princeton University and Assistant Professor at the Woodrow Wilson School of Public and International Affairs and in the Department of Mechanical and Aerospace Engineering at Princeton University (Robert H. and Alexander, Fall. “Balancing risks: nuclear energy & climate change.” Dædalus Volume 138, Issue 4, pp. 31-44. MIT Press Journals.)

In this paper we consider a nuclear future where 1,500 GW of base load nuclear power is deployed in 2050. A nuclear fleet of this size would contribute about one wedge, if the power plant that would have been built instead of the nuclear plant has the average CO2 emissions per kilowatt hour of all operating plants, which might be half of the value for a coal plant. Base load power of 1,500 GW would contribute one fourth of total electric power in a business-as-usual world that produced 50,000 terawatt-hours (TWh) of electricity per year, two-and-a-half times the global power consumption. However, in a world focused on climate change mitigation, one would expect massive global investments in energy efficiency–more efficient motors, compressors, lighting, and circuit boards–that by 2050 could cut total electricity demand in half, relative to business as usual. In such a world, 1,500 GW of nuclear power would provide half of the power. We can get a feel for the geopolitical dimension of climate change mitigation from the widely cited scenarios by the International Energy Agency (iea) presented annually in its World Energy Outlook (weo), even though these now go only to 2030. The weo 2008 estimates energy, electricity, and CO2 emissions by region. Its 2030 world emits 40.5 billion tons of CO2, 45 percent from electric power plants. The countries of theOrganisation for Economic Co-operation and Development (oecd) emit less than one third of total global fossil fuel emissions and less than one third of global emissions from electric power production. By extrapolation, at midcentury the oecd could contribute only one quarter of the world’s greenhouse gas emissions. It is hard for Western analysts to grasp the importance of these numbers. The focus of climate change mitigation today is on leadership from the OECD countries, which are wealthier and more risk averse. But within a decade, the targets under discussion today can be within reach only if mitigation is in full gear in those parts of the developing world that share production and consumption patterns with the industrialized world. The map (see Figure 1) shows a hypothetical global distribution of nuclear power in the year 2050 based on a highnuclear scenario proposed in a widely cited mit report published in 2003. Three-fifths of the nuclear capacity in 2050 as stated in the mit report is located in the oecd, and more nuclear power is deployed in the United States in 2050 than in the whole world today. The worldview underlying these results is pessimistic about electricity growth rates for key developing countries, relative to many other sources. Notably, per capita electricity consumption in almost every developing country remains below 4,000 kWh per year in 2050, which is one-fifth of the assumed U.S. value for the same year. Such a ratio would startle many analysts today–certainly many in China. It is well within limits of credulity that nuclear power in 2050 could be nearly absent from the United States and the European Union and at the same time widely deployed in several of the countries rapidly industrializing today. Such a bifurcation could emerge, for example, if public opposition to nu clear power in the United States and Europe remains powerful enough to prevent nuclear expansion, while elsewhere, perhaps where modernization and geopolitical considerations trump other concerns, nuclear power proceeds vigorously. It may be that the United States and other countries of the oecd will have substantial leverage over the development of nuclear power for only a decade or so. Change will not happen overnight. Since 2006, almost 50 countries that today have no nuclear power plants have approached the International Atomic Energy Agency (iaea) for assistance, and many of them have announced plans to build one or more reactors by 2020. Most of these countries, however, are not currently in a good position § Marked 12:40 § to do so. Many face important technical and economic constraints, such as grid capacity, electricity demand, or gdp. Many have too few trained nuclear scientists and engineers, or lack an adequate regulatory framework and related legislation, or have not yet had a public debate about the rationale for the project. Overall, the iaea has estimated that “for a State with little developed technical base the implementation of the first [nuclear power plant] would, on average, take about 15 years.” 11 This lead time constrains rapid expansion of nuclear energy today. A wedge of nuclear power is, necessarily, nuclear power deployed widely– including in regions that are politically unstable today. If nuclear power is suf-ficiently unattractive in such a deployment scenario, nuclear power is not on the list of solutions to climate change.

## 2NC – CP, Case

## CP

### Solves Proliferation – 2NC

#### Fuel bank is a litmus test for proliferation – it removes the ability to produce weapons under the guise of nuclear energy – that solves an arms race and Iran says yes

CSIS 9 (Center for Strategic and International Studies, “Time for a More Creative Negotiating Strategy with Iran,” 9-4, http://csis.org/blog/time-more-creative-negotiating-strategy-iran)

However, despite opposition, the fuel bank has promise because there has been preliminary support in the U.S., Russia, and some European countries, but also in Iran. In response to Obama’s proposal, Iran seemed interested in the idea, Iran welcomed on Monday a proposal to set up a global nuclear fuel repository, part of a U.S.-backed plan to put all uranium enrichment under strict international control. President Mahmoud Ahmadinejad, in Kazakhstan on a visit, said he supported a proposal to host the nuclear bank in the fellow Caspian nation, which is accessible from Iran by sea. “We think that (Kazakh President) Nursultan Nazarbayev’s idea to host a nuclear fuel bank is a very good proposal,” he told reporters after talks with the Kazakh leader. Iran’s support for the idea comes as U.S. President Barack Obama pushes for a “new beginning” in bilateral ties, and could play a role in mending bridges after decades of mistrust. Iran has said before that it would consider stopping sensitive uranium enrichment if guaranteed a supply of nuclear fuel from abroad. However, it has also frequently insisted on its right to master the complete nuclear fuel cycle, including enriching uranium, for peaceful purposes. There was also support from Larijani, The former secretary of Iran’s supreme national security council Ali Larijani announced, “we back the idea of establishing an international nuclear fuel bank.” Theoretical Benefits of a Fuel Bank While some version of a fuel bank has been proposed on numerous occasions, the details have never been worked out. In recent proposals, the fuel bank would be hosted in either Russia or Kazakhstan, be run by the IAEA, and sell nuclear fuel to any countries that wanted it. Nonproliferation advocates see a lot of promise in the fuel bank. They argue that the spread of nuclear power makes it too easy for country to convert peaceful nuclear power programs to nuclear weapons programs. A fuel bank would solve this concern because countries would not need to develop their own nuclear program to have access to nuclear energy. Therefore, the fuel bank could be a “litmus test” for proliferation. If a country wanted to develop a nuclear power program, and claimed they were doing so because of energy needs, their motivations would be suspect if a stable supply of nuclear fuel was available from a fuel bank. Joe Cirincione, an advocate of the fuel bank, who sees it as a potential solution to the deadlock with Iran, describes its benefits, First, it has the potential to address Iran’s concerns about security of fuel supply. An international fuel bank that is country-neutral, durable, and governed by objective criteria is more likely to attract Iranian support than a sui generis mechanism created specifically to deal with Iran. Second, a fuel-bank push would head off the regional proliferation consequences of Iran suddenly announcing its nuclear- or near-nuclear capability. At the very least, the existence of a credible nuclear fuel bank would make it harder for Iran’s Sunni Arab neighbors to pursue any nuclear weapons ambitions under the guise of nuclear energy development. Third, a nuclear fuel bank could serve as a first step towards more ambitious, global efforts to prevent the abuse of nuclear-fuel-cycle technology. That’s why the United States should press ahead with the fuel bank proposal with or without Iran’s support. This initiative would reduce the chances of a “virtual” arms race in the region by controlling the most sensitive component of the nuclear fuel cycle, uranium enrichment. The possibility that Iran may be left out of such an important initiative may also serve as an added inducement for Iran to forego uranium enrichment.

#### Sets a precedent that solves prolif

Ross 12 (Dennis, Distinguished Fellow and Counselor – Washington Institute, “What Could Diplomacy with Iran Produce?”, The Washington Institute, 4-5, Policy Watch 1920, http://www.washingtoninstitute.org/policy-analysis/view/what-could-diplomacy-with-iran-produce)

One virtue of this approach is that it would greatly strengthen the nonproliferation regime. If Iran were not enriching but getting its fuel from an international fuel bank (and also not reprocessing), it could establish a powerful precedent for all countries seeking nuclear power in the future -- a precedent that would make it difficult for any other country to break out and become a nuclear-weapons-capable state. Although there is little doubt this option offers the best outcome from a nonproliferation standpoint, there will be those, including certain P5+1 members, who may balk at an agreement that strips Iran of even the symbolic right to limited enrichment. In their eyes, such an approach would single out Iran to an unacceptable degree. They might also point out that the P5+1 offer made in July 2008 would have permitted Iran to achieve its full rights under the NPT once it restored international confidence in the purposes and capabilities of its nuclear program. From this standpoint, denying Iran enrichment of any sort would be a retreat from that offer. One could surely say that Iran, by defying the IAEA and the Security Council and engaging in terror internationally, has brought special treatment on itself and that the precedential value of the no-enrichment approach is so meaningful that it is worth pursuing. And, the fact is that Iran would still have an explanation for such an outcome: it would have civil nuclear power and it could rightfully claim that its solution would provide a future guide for all others in acquiring nuclear power. Still, the P5+1 could divide on this approach and might find common ground on an alternative. In this alternative approach, Iran would be permitted to have limited enrichment. Its ability to enrich would be limited in terms of the number of centrifuges that could operate and be installed, the amount of low-enriched uranium (LEU) that could be accumulated in country, and the level to which uranium could be enriched. For example, the P5+1 could ask Iran to accept the following restrictions: no more than 1,000 centrifuges could be installed; no more than 1,000 kilograms of LEU could remain in-country, with the remainder shipped out to ensure that Iran never possesses even a single bomb's worth of LEU; and enrichment levels could not exceed 5 percent. Given Tehran's pattern of cheating, a rigorous inspection regime would be required to ensure that Iranian facilities could not exceed these limits. Indeed, the verification system would have to be far more extensive than in the first scenario of no enrichment. Practically speaking, this would mean ongoing monitoring at several steps in the process to make sure there is no diversion of yellowcake, of uranium hexafluoride, or of LEU, as well as transparency on the production, installation, and storage of centrifuges.

#### Fuel bank solves prolif

CSIS 9 (Center for Strategic and International Studies, “Time for a More Creative Negotiating Strategy with Iran,” 9-4, http://csis.org/blog/time-more-creative-negotiating-strategy-iran)

More Creative Negotiations: An International Fuel Bank? One idea could be to go back to a proposal that was supported by the Obama administration earlier this year: an international fuel bank. Obama considered the fuel bank to be part of the agenda of “getting to zero”, The Obama administration is specifically supporting the development of an international nuclear-fuel bank that aspiring nuclear-power states could tap to feed their reactors. Such a system, say U.S. officials, would undercut demands of countries like North Korea and Iran that they need to develop their own infrastructure to produce nuclear fuel. Such technologies can be easily shifted into producing fissile material for nuclear weapons. A senior Obama administration official disclosed Sunday that, as part of that effort, the White House has had high-level contact in recent weeks with Kazakhstan to serve as host for such a proposed fuel bank. The White House is seriously considering the offer, and transferring control of the operation to the U.N.’s nuclear watchdog, the International Atomic Energy Agency. Only countries that renounce nuclear weapons and the production of nuclear fuel could take part in the program, said the official. The IAEA has for years supported the idea of a nuclear fuel bank, and it’s been understood that it would help monitor the facility.

### CP Solves Prolif/Nuke Leadership

#### Fuel bank is a critical signal for US leadership

Lugar and Bayh 6 (Dick and Evan, US Senators-Indiana and members of Senate Foreign Relations Cmte, "A nuclear fuel bank advocated," http://articles.chicagotribune.com/2006-10-22/news/0610220347\_1\_nuclear-weapons-nuclear-reactor-fuel-nuclear-non-proliferation-treaty)

While the full ramifications of North Korea's nuclear tests remain unclear, one thing is certain: The international community has failed to prevent countries from developing nuclear weapons, and we must act now to prevent a world of multiplying nuclear-armed countries and terrorists.¶ For too long, the Nuclear Non-Proliferation Treaty has been exploited. States are allowed to walk up to the threshold of a nuclear bomb legally and openly. If a state agrees to forswear nuclear weapons, the treaty has been wrongly interpreted to say it may acquire nuclear technology and fuel, including enrichment facilities.¶ From there, all it takes is a country's decision to leave the treaty and, with minimal knowhow, become a nuclear weapons state complete with a steady supply of bomb-grade uranium and plutonium. This is how North Korea got the bomb, and it's how Iran is seeking to do so as well.¶ We need a new international non-proliferation standard that prevents countries from using the guise of nuclear energy to develop nuclear weapons.¶ The dangers are so great that the world community must declare that there is no right under the Nuclear Non-Proliferation Treaty to enrich uranium or separate plutonium from spent nuclear fuel. No new country should be able to pursue uranium enrichment or plutonium separation, even if claiming to do so for civil nuclear energy purposes.¶ Unfortunately, this change appears to be too late to prevent a nuclear North Korea. But the opportunity remains to stop countries such as Iran that may take a similar tack.¶ Unless the international community, led by the U.S., takes this important step, the coming surge in demand for nuclear power will lead more and more nations to seek their own enrichment facilities. Making the case for this change will be difficult, but it is necessary given the continued failures of the current approach.¶ Some countries will complain that in opposing new enrichment and reprocessing facilities, the U.S. is breaking the basic bargain of the treaty, which offers assistance on peaceful nuclear programs to countries that agree not to build nuclear bombs. Instead, for countries that renounce their own enrichment and reprocessing capabilities, we would offer guaranteed access to nuclear reactor fuel at reasonable prices, consistent with the treaty's true intent.¶ To assure steady nuclear reactor fuel supplies and services, we propose the establishment of an International Nuclear Fuel Bank, controlled by the International Atomic Energy Agency. Countries would be able to draw fuel for their power plants, provided they agree to strict verification and inspections, and then return the spent fuel for safe oversight by the agency. This proposal will ensure access to nuclear energy for peaceful purposes and prevent weapons proliferation, consistent with the treaty's true intent.¶ Equally important, the creation of the fuel bank cuts short the debate over nuclear technology rights. It will draw a clear line in the sand: Countries that refuse fuel bank services will come under immediate suspicion about their weapons intentions.

### 2NC Solves Terror

#### Fuel bank solves loose material

Chu, 10 – US Energy Secretary (Steven, 9/20. “Steven Chu: an international fuel bank can ensure peaceful use of nuclear energy.” http://www.csmonitor.com/Commentary/Global-Viewpoint/2010/0920/Steven-Chu-an-international-fuel-bank-can-ensure-peaceful-use-of-nuclear-energy)

Every year, the International Atomic Energy Agency (IAEA), the nuclear watchdog arm of the UN, gathers ministers from around the world to discuss ways to promote nuclear energy, strengthen efforts to keep other countries from illegally acquiring nuclear weapons, reduce stockpiles of nuclear weapons, and keep nuclear material out of the hands of terrorists. This year in Vienna, I am promoting the idea of an international “fuel bank” to encourage the peaceful use of nuclear power.

#### Solves terror

NYT, 10 (William J Broad, The New York Times, 12/3. “Buffett Helps Create Nuclear Fuel Bank” http://www.nytimes.com/2010/12/04/science/04nuke.html)

Spurred by a pledge of $50 million from Warren E. Buffett, the billionaire investor and philanthropist, the board of the International Atomic Energy Agency voted Friday to set up a global nuclear fuel bank that aspiring nations can turn to for reactor fuel instead of making it themselves. The goal is to reduce the risks of weapons proliferation by providing an alternative to the production of nuclear fuel, which countries can use to power either bombs or reactors. The built-in ambiguity explains the world’s jitters over plants in Iran and North Korea for purifying uranium. The new bank is seen as creating a global mechanism to aid the lighting of cities and to hinder the means of destroying them. “I’ve never been $50 million lighter and felt better,” Mr. Buffett said in an interview on Friday. He called the fuel bank an investment in a safer world. “The spread of weapons of incredible destructive capability is the No. 1 problem facing mankind,” he said. The bank, Mr. Buffett added, promised to get at least “part of the genie back in the bottle.” Since the nuclear age began, the globalization of atomic production has been much discussed, but never attempted. The vote on the bank — taken in Vienna by the 35 countries that make up the board of the atomic energy agency, an arm of the United Nations — comes as dozens of developing countries have expressed interest in nuclear power. “This is a breakthrough in global cooperation,” said Sam Nunn, the former Democratic senator from Georgia and co-chairman of the Nuclear Threat Initiative, a group in Washington that backed the bank’s creation and solicited the $50 million donation from Mr. Buffett to help get it started. Mr. Nunn said the bank would “enable peaceful uses of nuclear energy while reducing the risks of proliferation and catastrophic terrorism.”

### 2NC Multi-Condo Good

**Condo’s good**

**1. Neg flex – can’t use kritiks and counterplans and test the aff from different angles**

**2. Information processing – multiple choices make for more tactile and harder debate – fosters 2ac tech skills**

**3. Real-world – policy-makers aren’t forced to stick to their opinions if they realize a flaw**

**[4. Research – sides have to learn a broader variety of issues instead of relying on generics**

**5. Checks new affs – neg needs to be able to test multiple options on the fly]**

**Counter-interpretation – we get** [INSERT] **– it’s a logical fixed limit that mitigates their offense**

**Not a voter –**

**[If going for] just a reason to stick us with the CP – solves 1AR allocation**

**AT: Strat Skew**

**No reason we skewed you any more than disads, T, or impact turns would – our advocacies aren’t contradictory**

**AT: In-depth education**

**2NR checks – still gain education but are forced to think about time allocation too – eventually will come down to the best option**

**AT: Neg Bias**

**Aff has first and last speech, gets to pick the focus of the debate, and can go for a single dropped arg in the 2ar – this topic proves there is no predictable neg ground**

**AT: C/I – One Condo**

**Can’t solve either teams offense – means we can’t test new options on the fly and leads to staler debate**

**Arbitrary and self-serving – like saying you can cheat just not in the specific way you cheated in this debate – if theory is entirely offense/defense, then all of our offense is a linear disad**

**AT C/I – Dispo**

**Arbitrary and not real-world – forces us into random rules to stick us with advocacies, let’s the aff frame the debate**

## Solvency

### Costs Outweigh 2NC

#### Plan’s initial commercialization wont spillover – too many uncertainties

**Fahring, 11** – J.D. from the University of Texas School of Law, law clerk at the Texas Eleventh Court of Appeals interested in energy law, environmental law, and tax law (T.L., “NOTE: Nuclear Uncertainty: A Look at the Uncertainties of a U.S. Nuclear Renaissance.” Texas Environmental Law Journal, 41 Tex. Envtl. L.J. 279, Lexis.)

But this initial success does not necessarily ensure that new nuclear construction will take place: In announcing the new reactor license applications ... utilities have made clear that they are not committed to actually building the reactors, even if the licenses are approved. Large uncertainties about nuclear plant construction costs still remain ... All those problems helped cause the long cessation of U.S. reactor orders and will need to be addressed before financing for new multibillion-dollar nuclear power plants is likely to be obtained. n268

#### Previous attempts prove solvency is doomed – nuclear can’t compete

Lovins, 10 – Chair and Chief Scientist of Rocky Mountain Institute (Amory B, 10/25. "Nuclear Socialism." Weekly Standard, VOL. 16, NO. 06. http://[www.weeklystandard.com/articles/nuclear-socialism\_508830.html?page=1](http://www.weeklystandard.com/articles/nuclear-socialism_508830.html?page=1))

With such juicy incentives, why won’t private investors finance reactors? In 2005-08, with the strongest subsidies, capital markets, and nuclear politics in history, why couldn’t 34 proposed reactors raise any private capital? Because there’s **no business case**. As a recent study by Citibank U.K. is titled “New Nuclear—the Economics Say No.” That’s why central planners bought all 61 reactors now under construction worldwide. None were free-market transactions. Subsidies can’t reverse bleak fundamentals. **A defibrillated corpse will jump but won’t revive**. American taxpayers already reimburse nuclear power developers for legal and regulatory delays. A unique law caps liability for accidents at a present value only one-third that of BP’s $20 billion trust fund for oil-spill costs; any bigger damages fall on citizens. Yet the competitive risks facing new reactors are uninsured, high, and escalating. Since 2000, as nuclear power’s cost projections have more than tripled, its share of global electricity generation has fallen from 17 percent to 13 percent. That of cogeneration (making electricity together with useful heat in factories or buildings) and renewables (excluding big hydropower projects) rose from 13 percent to 18 percent. These bite-sized, modular, quickly built projects—with financial risks, costs, and subsidies generally below nuclear’s and declining​—now dominate global power investments. Last year, renewables (wind, water, solar, geothermal), excluding large hydroelectric dams, attracted $131 billion of private capital and added 52 billion watts. Global nuclear output fell for the past three years, capacity for two.

#### No global adoption – waste and costs

Biello, 12 – Scientific American's associate editor for environment and energy (David, 3/21. “Can Fast Reactors Speedily Solve Plutonium Problems?” https://www.scientificamerican.com/article.cfm?id=fast-reactors-to-consume-plutonium-and-nuclear-waste)

That additional level of transmutation might prove too costly, both in terms of getting the technology licensed to operate in the U.K. and in constructing the reactor itself. Such fast reactors are more expensive than even traditional reactors, such as Westinghouse's new AP-1000 under construction in China and the U.S., which are estimated to cost roughly $7 billion apiece. Conventional light-water reactors can also "consume" plutonium, if need be. "If I was going to try to get rid of 100 tons of plutonium, I'd burn it in a light-water reactor," Cochran says, by making it into the mixed oxide fuels. And "the cheapest thing to do is vitrify it [convert it to glass] and mix it with other nuclear waste." Plus, the U.K. has a poor record in the past with its own experimental fast reactor designs—the Dounreay Fast Reactor and the Prototype Fast Reactor—including multiple sodium leaks. Dounreay also suffered an explosion at its dumping ground for used sodium coolant that may have contributed to radioactive particles from spent fuel turning up on nearby beaches. The Dounreay and Prototype cleanup and decommissioning continue today, despite both having been shut down for decades. Originally, such fast reactors were developed to solve a problem that never panned out: scarcity in the global supply of uranium. The idea was to create fuel within the reactors themselves once fission began, in effect making more than they consumed. But, factoring in inflation, uranium prices remain the same today as they were at the dawn of the nuclear era. "Like all minerals, improvements in the efficiency of extraction and the ability to dig for deeper ores outpaces the depletion of the resource over 100 years or more," Cochran notes. "Economically, fast reactors are not competitive and they're never going to be competitive." "We're not going to run out of uranium," Loewen admits. "Here's a solution for this stuff that's piled up." Ultimately, however, the core problem may be that such new reactors don't eliminate the nuclear waste that has piled up so much as transmute it. Even with a fleet of such fast reactors, nations would nonetheless require an ultimate home for radioactive waste, one reason that a 2010 M.I.T. report on spent nuclear fuel dismissed such fast reactors. Or, as Cochran puts it: "If you want to get rid of milk, don't feed it to cows."

#### Uncertainty guarantees high costs – blocks adoption

**Fahring, 11** – J.D. from the University of Texas School of Law, law clerk at the Texas Eleventh Court of Appeals interested in energy law, environmental law, and tax law (T.L., “NOTE: Nuclear Uncertainty: A Look at the Uncertainties of a U.S. Nuclear Renaissance.” Texas Environmental Law Journal, 41 Tex. Envtl. L.J. 279, Lexis.)

The rising projected costs of nuclear construction in the United States may also be related to rising costs for materials, labor, and capital. From 2000 to 2008, the cost of building any type of new plant more than doubled. [n151](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n151) Among the factors behind this [\*293] increase: high international demand for generating equipment, rising labor costs, and rising costs for construction materials (cement, steel, and copper). [n152](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n152) The costs associated with nuclear construction, however, are increasing at a faster rate than construction costs for its fossil fuel rivals. [n153](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n153) From 2003 to 2008, the projected cost of nuclear power plant construction increased at a rate of fifteen percent a year. [n154](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n154) In part, the greater increase in costs for nuclear construction reflects the atrophy of the industry in the United States over the last few decades. [n155](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n155) For instance, two decades ago the American Society of Mechanical Engineers (ASME) licensed 400 nuclear suppliers and 900 sub-suppliers in the United States; as of 2011, ASME license only eighty suppliers and 200 sub-suppliers. [n156](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n156) Moreover, world-wide forging supply of reactor components is limited. [n157](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n157) Today, only two companies are qualified to supply heavy forgings needed for nuclear construction: Japan Steel Works and Creusot Forge, and only Japan Steel Works can manufacture ultra-heavy forgings. [n158](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n158) The limited supply of ultra-heavy forgings alone could double or triple nuclear construction costs. [n159](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n159) In addition, the lack of skilled labor for nuclear construction could prolong construction times and increase costs. [n160](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n160) Further increasing costs of nuclear construction is the cost of capital. Technical uncertainty, input-cost uncertainty, and operating and revenue uncertainty associated with nuclear power combine to increase the cost of capital in financing nuclear construction. [n161](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n161) For instance, Standard & Poor argued in 2005 that "the industry's legacy of cost growth, technological problems, and cumbersome political and regulatory oversight and the newer risks brought about by competition ... may have kept the credit risk too high for even [federal legislation providing loan guarantees] to overcome." [n162](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n162) D. Absence of Recent Nuclear Construction in the United States As noted above, the history of nuclear power has led to a fourth factor causing uncertainty to developers: the fact that it has been over a decade since the last nuclear power was constructed to completion in the United States. [n163](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n163) Current projections of the cost for new construction in the United States rely on the costs of recent foreign builds. [n164](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n164) Differences in regulation, access to alternative technologies, and public acceptance between the United States and these foreign countries render the accuracy of [\*294] projections based on foreign builds uncertain. [n165](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n165) Because the amounts of time, effort, and materials needed to build a new nuclear plant in the United States are unclear, the lack of recent U.S. nuclear construction represents a technical uncertainty to developers. [n166](http://www.lexisnexis.com.go.libproxy.wfubmc.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1347308966718&returnToKey=20_T15488658602&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.346870.9370703187" \l "n166)

### Long Timeframe 2NC

#### The demonstration project alone takes a decade – can’t solve fast enough to solve the energy crisis

ANS 5 (American Nuclear Society, “Fast Reactor Technology: A Path to Long-Term Energy Sustainability.” November, http://www.ans.org/pi/ps/docs/ps74.pdf)

Reaping the full benefits of fast reactor technology will take a decade or more for a demonstration reactor, followed by buildup of a fleet of operating power stations. For now and in the intermediate-term future, the looming short-term energy shortage must be met by building improved, proven thermal-reactor power plants. To assure longer-term energy sustainability and security, the American Nuclear Society sees a need for cooperative international efforts with the goal of building a fast reactor demonstration unit with onsite reprocessing of spent fuel.

### Nat Gas Blocks 2NC

#### Prefer our evidence – recent trends decisively conclude neg, but their authors always think that the Renaissance is around the corner

Maize 12 (Kennedy, Staff Writer – POWER Magazine, “A Bumpy Road for Nukes,” 8-6, POWERnews, http://www.powermag.com/nuclear/4859.html)

It’s been a rough road for nuclear advocates in the U.S. of late, although nothing seems to dent the Pollyanna armor of the nuclear crowd, always appearing to believe a revival is just over the horizon and headed into view. Here are a few fraught developments for the nuclear business that suggest the positive vision just might be a mirage. \* GE CEO Jeff Immelt in a recent interview with the Financial Times revealed a surprising and somewhat uncharacteristic realism with regard to the company’s nuclear future and that of its partner in radioactivity, Hitachi. In London for the Summer Olympics, Immelt told a reporter for the FT, “It’s really a gas and wind world today. When I talk to the guys who run the oil companies, they say look, they’re finding more gas all the time. It’s just hard to justify nuclear, really hard. Gas is so cheap, and at some point, really, economics rule.” For the nuclear industry, economics has always been the fundamental enemy – not the green-tinged, hairy anti-nuke activists, but the folks with the green eye shades, sharp pencils and, today, even sharper spreadsheets. The nuclear execs long have pursued governments as their bulwark against markets, and that has often worked. Today, as Immelt notes, gas has made the market forces so overwhelming, at least in those places such as the U.S. where gas is astonishingly abundant, that even government likely can’t come to the rescue of nuclear power. Could that have something to do with the abject failure of the 2005 Energy Policy Act’s loan guarantee provisions, which have not worked for renewables any better than they have worked for nukes? Indeed, the threat of gas is at least as potentially toxic for many wind and solar projects as it is for nuclear and coal new build. \* In Georgia, the Southern Company is facing what looks like growing problems with its Vogtle project, which aims for two new nuclear units using the unproven but promising Westinghouse AP1000 reactor design. With its federal loan in jeopardy (Southern says it can go ahead without taxpayer funds) and the project running behind schedule and over budget, the Atlanta-based utility now faces lawsuits brought by the reactor vendor and the construction contractor Shaw Group. The amount in dispute, some $29 million, is tiny compared to the multi-billion-dollar price tag for the project. But it may be revealing of ruptures in the deal. Robert Marritz, an energy lawyer and veteran industry observer, publisher of ElectricityPolicy.com, commented that “the very filing of a lawsuit at this stage of the first nuclear plant construction in decades is stunning, reflecting stresses in a relationship that should, one would think, be contained and resolved rather than boiling over into public view.” Indeed, the parties are also engaged in a larger, perhaps nastier, dispute involving $800 million that has not gotten much public exposure. And that’s real money. \* Moving to California, the long-running saga of Edison International’s San Onofre Nuclear Generating Station (SONGS, how’s that for an inept acronym?) continues, with little clarity in sight. The plant has been out of service since January as a result of unexpected and still unexplained tube wear in the plant’s steam generators. According to Bloomberg New Energy Finance, the outage is costing the utility about $1.5 million a day just in lost revenue. The cost to the state in jeopardized reliability hasn’t been calculated, although Edison has started up mothballed gas capacity to fill the supply gap. There is no firm date for restart at the nuclear plant. In the meantime, the California Public Utilities Commission is planning a formal investigation of the outage and Edison’s response, but recently decided to delay that until the utility files a legally-required report with the CPUC November 1. CPUC President Mike Peevey is a former executive with the Los Angeles-based utility.

#### Gas destroys nuclear – more predictable, cheaper, and faster

Smith 12 (Rebecca, Staff Writer, “Cheap Natural Gas Unplugs U.S. Nuclear-Power Revival,” 3-15, http://online.wsj.com/article/SB10001424052702304459804577281490129153610.html)

What killed the revival wasn't last year's nuclear accident in Japan, nor was it a soft economy that dented demand for electricity. Rather, a shale-gas boom flooded the U.S. market with cheap natural gas, offering utilities a cheaper, less risky alternative to nuclear technology. "It's killed off new coal and now it's killing off new nuclear," says David Crane, chief executive of NRG Energy Inc., NRG +3.58% a power-generation company based in Princeton, N.J. "Gas has come along at just the right time to upset everything." Across the country, utilities are turning to natural gas to generate electricity, with 258 plants expected to be built from 2011 through 2015, federal statistics indicate. Not only are gas-fired plants faster to build than reactors, they are much less expensive. The U.S. Energy Information Administration says it costs about $978 per kilowatt of capacity to build and fuel a big gas-fired power plant, compared with $5,339 per kilowatt for a nuclear plant. Already, the inexpensive natural gas is putting downward pressure on electricity costs for consumers and businesses. The EIA has forecast that the nation will add 222 gigawatts of generating capacity between 2010 and 2035—equivalent to one-fifth of the current U.S. capacity. The biggest chunk of that addition—58%—will be fired by natural gas, it said, followed by renewable sources, including hydropower, at 31%, then coal at 8% and nuclear power at 4%. "What utility doesn't want cheap fuel?" says Steve Piper, associate director of energy fundamentals at SNL Financial, a research company. He predicts natural gas will remain the "default fuel" for as long as gas production remains high and prices stay low.

### Export Alt Cause 2NC

#### Hard to get an export license, it’s a bureaucratic mess and there is political opposition to exporting nuclear power – that’s NEI

#### Even if our tech is superior, export restrictions make that meaningless

NEI 12 (Nuclear Energy Institute, “Improved Policies for Commercial Nuclear Trade Will Create American Jobs,” June, http://www.nei.org/resourcesandstats/documentlibrary/newplants/policybrief/improved-policies-for-commercial-nuclear-trade-will-create-american-jobs)

While U.S. firms offer some of the most innovative and safest nuclear energy technologies, they are hampered by cumbersome trade regulations, lack of coordination among the federal agencies involved, an inefficient export licensing process, limited options for financing nuclear exports and the absence of an international liability regime. These companies face intense competition from suppliers in nations with less restrictive policies and substantial government subsidies for their nuclear industries. To facilitate a greater U.S. role in the global commercial nuclear market, government support must be integrated into a seamless mechanism that includes coordination of nuclear trade policy, creation of bilateral agreements, export control reform and enhanced export financing. It also is vital that the United States pursue the international adoption of effective civil nuclear liability regimes.

### A2: Export Reform Solves [Glasgow 12]

#### This evidence is bad –

#### First – doesn’t even talk about nuclear power, just export reform generally.

#### Second – it talks about Obama’s proposal—it doesn’t even say if or when it will pass.

#### No chance for export control reform – also magnifies the politics link

Buehler 11-29 (Don, “Obama’s Export Control Reform: Moving Forward?,” Export Solutions, 2012, <http://www.exportsolutionsinc.com/blog/obamas-export-control-reform-moving-forward/>)

Now that the presidential election is behind us, the big question in the trade compliance community seems to be: Will President Obama’s export control reform efforts continue to move forward? As we have chronicled numerous times on our export blog, the Obama administration has taken great strides during the past few years to help set the stage for a much-needed, and long overdue, restructuring of U.S. export regulations. (If you’ve missed the previous posts, you can find all of our posts about export control reform at this link.) Leading up to the election on Nov. 6, it seemed that this issue was placed on the back burner in lieu of campaigning and “politics as usual.” In fact, the entire reform effort basically ground to a halt over the summer. We saw no 38(f) Congressional notification to begin the movement of USML items to the CCL. There were no proposed or final rules being released by either BIS or DDTC. And with growing threats in the Middle East (Iran, Libya, etc.), it started to feel like the last thing on anyone’s mind was export control reform. Now, however, we’re seeing signs of movement again. Earlier this week, DDTC released the long-awaited proposed new version of USML Category XI (Military Electronics). As many of you know, this category represents a substantial quantity of items and technologies which are currently ITAR controlled, and which may be moved to the CCL – easing (and possibly eliminating) license restrictions for many U.S. exporters. It’s also worth noting that everyone expects more proposed new categories in the weeks and months ahead. This includes Firearms (Cat. I), Ammunition (Cat. III), Missiles (Cat. IV) and more. We’re still a long way from the “four singles” that has now become a trademark of the Obama export control reform initiative. In fact, the looming fiscal cliff issue is likely going to occupy Washington for the remainder of this year. Also, don’t forget that a crucial aspect of the reform effort lies with Congress, which continues to be as partisan and divisive as ever. But at least we’re seeing movement again, which is something we can all be thankful for this holiday season.

### A2: Cost-Competition Key [Rosner 11]

#### Their Rosner card is laughable –

#### It says in order to have an export market, reactors need to be cost competitive. Yes that is obvious, but that just means there is international demand. That’s not our argument – export controls mean even if there is demand – it’s literally illegal to export nuclear technology.

#### Export control make cost differences irrelevant – bureaucracy deters international demand

ITA, 11 – International Trade Administration (U.S. Department of Commerce, February. Manufacturing and Services Competitiveness Report. “The Commercial Outlook for U.S. Small Modular Nuclear Reactors.” <http://trade.gov/mas/ian/build/groups/public/@tg_ian/@nuclear/documents/webcontent/tg_ian_003185.pdf>)

A number of U.S. companies are pursuing SMR technology for commercial sale, including GEHitachi Nuclear, Westinghouse Electric Company, NuScale Power, Babcock & Wilcox, Hyperion Power Generation, Advanced Reactor Concepts, and General Atomics. Just like exporters of traditional large reactors, U.S. SMR vendors would face intense foreign competition, primarily by state-owned or state-aligned enterprises. Foreign nuclear companies have enjoyed significant government support, ranging from direct government ownership and management to favorable financing, industrial coordination, and support for manufacturers. Some U.S. suppliers also regard the lack of international licensing standards as an obstacle to expanding their business. They say that obtaining regulatory approval in one market does not provide any “leg up” in obtaining approval in another market, which means that the process has to be repeated for each country that the supplier wants to sell to. However, it is difficult to see how international licensing standards could be developed or enforced given the unique national circumstances that factor into a regulator’s licensing decisionmaking. The discretion of these national regulators cannot be compromised. More generally, U.S. suppliers also say that the lack of regulatory infrastructure in many countries interested in SMR technology is a problem for ensuring the safe and secure deployment of the technology. This challenge also applies to larger, traditional reactors. Nuclear liability is a significant concern for SMR and large reactor designers. Currently, no global nuclear liability regime exists. This situation not only complicates commercial arrangements, but also means that, in the unlikely event of a nuclear incident, claims for damages would be the subject of protracted and complicated litigation in the courts of many countries against multiple potential defendants with no guarantee of recovery. The IAEA-sponsored Convention on Supplementary Compensation for Nuclear Damage (CSC) is the only international instrument that provides the basis for establishing a global regime, including countries with and without nuclear power facilities. U.S. nuclear suppliers have stated that the implementation of CSC is a necessity for pursuing a major nuclear export program

#### Rosner concludes neg in the footnotes

Rosner, 11 [Small Modular Reactors – Key to Future Nuclear Power Generation in the U.S, Robert Rosner and Stephen Goldberg Energy Policy Institute at Chicago The Harris School of Public Policy Studies Contributor: Joseph S. Hezir, Principal, EOP Foundation, Inc. Technical Paper, Revision 1 November, 2011, <https://epic.sites.uchicago.edu/sites/epic.uchicago.edu/files/uploads/EPICSMRWhitePaperFinalcopy.pdf>]

Prefabrication, preassembly, modularization, and off-site fabrication involve the fabrication or assembly of systems and components at off-site locations and manufacturing plants. Once completed, the systems or components are shipped to a construction job site for installation at the appropriate time. These techniques offer the promise of lower project costs, shorter schedules, improved quality, and more efficient use of labor and materials. Various obstacles stand in the way of the widespread use of such technologies, including updated codes and standards (including adoption by the U.S. Nuclear Regulatory Commission) that impede innovative practices (http://modular.org/marketing/documents/NRC\_USConstructionIndustry\_Report.pdf).

### A2: Licensing Solves [NRC 12]

#### Export and construction licenses are distinct – this card link turns the whole aff – the reason the nuclear industry is pushing for export reform is because domestic demand is down

Wingfield 12 (Brian, “Nuclear Firms Seek Eased Export Rules as U.S. Demand Wanes,” October, Bloomberg Business Week, <http://www.businessweek.com/news/2012-10-01/nuclear-companies-seek-relaxed-export-rules-as-u-dot-s-dot-demand-wanes>)

The U.S. nuclear-power industry is seeking to ease export restrictions so it can sell equipment and technology to nations including China and Russia as domestic demand wanes for reactors. Regulations unchanged since the end of the Cold War impede U.S. companies in gaining export licenses, putting suppliers at a global disadvantage, according to a report released today by the Nuclear Energy Institute, a Washington-based group whose members include Exelon Corp. (EXC) and Southern Co. (SO) U.S. rules are “more complex, restrictive and time- consuming to fulfill” than in France, Japan, Russia and South Korea, where competing suppliers are based, according to the report. The global market may be worth a quarter of a trillion dollars within a decade. The Nuclear Regulatory Commission this year issued its first reactor-construction licenses in more than three decades, while U.S. companies struggle to arrange financing for additional units. A glut of natural gas has lowered prices for the fuel, discouraging investment in more expensive sources including nuclear power. Southern’s reactor project in Georgia is awaiting final approval 2 1/2 years after winning a conditional $8.3 billion Energy Department loan guarantee. The NRC in August imposed a two-year freeze on final decisions for power-plant licenses in response to a court decision requiring a reassessment of risks associated with storing nuclear waste. Reactors Advance Nations are advancing plans to build reactors, even after a tsunami and earthquake in March 2011 triggered a triple meltdown at Tokyo Electric Power Co. (9501)’s Fukushima Dai-Ichi plant. At least 65 reactors are under construction, with 26 in China, 10 in Russia and seven in India, according to the World Nuclear Association, a London-based group that promotes nuclear power. Demand for commercial nuclear technology may be worth $500 billion to $740 billion and support tens of thousands of jobs during the next decade, NEI said in comments filed with the Energy Department in December. Goods for commercial use include reactor components and fuel. While other nations have one agency to oversee export licensing, the U.S. process is regulated by the Commerce, Energy and State departments, and the Nuclear Regulatory Commission, according to the report. The NRC bars commercial exports to six nations, including Cuba, Iran, Sudan and Syria. ‘Bureaucratic Maze’ “For U.S. exporters and their customers, navigating the bureaucratic maze for a U.S. export license presents a challenge in itself that has no parallel in the other countries surveyed in this study,” its said. The Energy Department, which has jurisdiction over nuclear- related assistance for foreign countries, has proposed rule revisions that “would significantly expand the scope of technologies covered by the regulation,” according to today’s report, prepared by for the NEI by the law firm Pillsbury Winthrop Shaw Pittman LLP. Compared with the regulatory systems Russia, France, Japan and Korea, “the U.S. regime imposes few deadlines for decision- making on export license applications,” according to the report. Processing export licenses in the U.S. can take a year or more, it said. Exelon of Chicago wants to export its operations methods, which would involve sending top managers abroad to provide guidance on reactor technology and safety, according to Bradley Fewell, vice president and deputy general counsel for Exelon Generation Co. LLC. “These regulations are hampering our ability to expand the sale of and the implementation of” the product, he said at a press conference today in Washington. Exelon is the largest U.S. owner and operator of commercial nuclear reactors.

### PRISM Fails 2NC

#### PRISM generates a ton of waste in the short term

Pearce, 12 – an award-winning author and journalist based in London. He has reported on environment, science, and development issues from sixty-seven countries over the past twenty years (Fred, 8/1. “Are fast-breeder reactors a nuclear power panacea?” http://www.energybulletin.net/stories/2012-08-01/are-fast-breeder-reactors-nuclear-power-panacea)

Proponents of fast reactors see them as the nuclear application of one of the totems of environmentalism: recycling. But many technologists, and most environmentalists, are more skeptical. The skeptics include Adrian Simper, the strategy director of the UK’s Nuclear Decommissioning Authority, which will be among those organizations deciding whether to back the PRISM plan. Simper warned last November in an internal memorandum that fast reactors were “not credible” as a solution to Britain’s plutonium problem because they had “still to be demonstrated commercially” and could not be deployed within 25 years. The technical challenges include the fact that it would require converting the plutonium powder into a metal alloy, with uranium and zirconium. This would be a large-scale industrial activity on its own that would create “a likely large amount of plutonium-contaminated salt waste,” Simper said. Simper is also concerned that the plutonium metal, once prepared for the reactor, would be even more vulnerable to theft for making bombs than the powdered oxide. This view is shared by the Union of Concerned Scientists in the U.S., which argues that plutonium liberated from spent fuel in preparation for recycling “would be dangerously vulnerable to theft or misuse.”

#### Even if you win all your arguments, short-term security risks outweigh

Pearce, 12 – an award-winning author and journalist based in London. He has reported on environment, science, and development issues from sixty-seven countries over the past twenty years (Fred, 8/1. “Are fast-breeder reactors a nuclear power panacea?” http://www.energybulletin.net/stories/2012-08-01/are-fast-breeder-reactors-nuclear-power-panacea)

But now climate change, with its urgency to reduce fossil fuel use, and growing plutonium stockpiles have changed perspectives once again. The researchers’ blueprints are being dusted off. The PRISM design is based on the Experimental Breeder Reactor No 2, which was switched on at the Argonne National Laboratory in Illinois in 1965 and ran for three decades. Here is how conventional and fast reactors differ. Conventional nuclear reactors bombard atoms of uranium fuel with neutrons. Under this bombardment, the atoms split, creating more neutrons and energy. The neutrons head off to split more atoms, creating a chain reaction. Meanwhile, the energy heats a coolant passing through the reactor, such as water, which then generates electricity in conventional turbines. The problem is that in this process only around 1 percent of the potential energy in the uranium fuel is turned into electricity. The rest remains locked up in the fuel, much of it in the form of plutonium, the chief by-product of the once-through cycle. The idea of fast reactors is to grab more of this energy from the spent fuel of the conventional reactor. And it can do this by repeatedly recycling the fuel through the reactor. The second difference is that in a conventional reactor, the speed of the neutrons has to be slowed down to ensure the chain reactions occur. In a typical pressurized-water reactor, the water itself acts as this moderator. But in a fast reactor, as the name suggests, the best results for generating energy from the plutonium fuel are achieved by bombarding the neutrons much faster. This is done by substituting the water moderator with a liquid metal such as sodium. Proponents of fast reactors see them as the nuclear application of one of the totems of environmentalism: recycling. But many technologists, and most environmentalists, are more skeptical. The skeptics include Adrian Simper, the strategy director of the UK’s Nuclear Decommissioning Authority, which will be among those organizations deciding whether to back the PRISM plan. Simper warned last November in an internal memorandum that fast reactors were “not credible” as a solution to Britain’s plutonium problem because they had “still to be demonstrated commercially” and could not be deployed within 25 years. The technical challenges include the fact that it would require converting the plutonium powder into a metal alloy, with uranium and zirconium. This would be a large-scale industrial activity on its own that would create “a likely large amount of plutonium-contaminated salt waste,” Simper said. Simper is also concerned that the plutonium metal, once prepared for the reactor, would be even more vulnerable to theft for making bombs than the powdered oxide. This view is shared by the Union of Concerned Scientists in the U.S., which argues that plutonium liberated from spent fuel in preparation for recycling “would be dangerously vulnerable to theft or misuse.” GEH says Simper is mistaken and that the technology is largely proven. That view seems to be shared by MacKay, who oversees the activities of the decommissioning authority. The argument about proliferation risk boils down to timescales. In the long term, burning up the plutonium obviously eliminates the risk. But in the short term, there would probably be greater security risks. Another criticism is the more general one that the nuclear industry has a track record of delivering late and wildly over budget — and often not delivering at all.

### General Framing 2NC

#### View their ev w/ skepticism – nuclear lobby are hacks.

Todhunter 9/14 [Colin, Global Research, Nuclear Power: The Energy of Protest. The Future could be Renewable September 14, 2012 http://www.globalresearch.ca/nuclear-power-the-energy-of-protest-the-future-could-be-renewable/?utm\_source=rss&utm\_medium=rss&utm\_campaign=nuclear-power-the-energy-of-protest-the-future-could-be-renewable]

Proliferation concerns aside, the role that the powerful pro-nuclear lobby plays in shaping the debate about nuclear energy should not be underestimated. The US Nuclear Energy Institute (NEI) is described by Dr Helen Caldicott as the propaganda wing for the US nuclear industry, which spends millions of dollars annually to engineer public opinion. The NEI forwards the message that nuclear energy is clean, safe and cheap and in promoting this message has often attacked opponents and targeted legislators and policy makers via ‘independent’ reports, phoney claims and ‘donations’. Journalism Professor Karl Grossman of the State University of New York suggests the misinformation from General Electric and Westinghouse, the ‘Coke and Pepsi’ of the nuclear industry (who will incidentally both benefit enormously from India’s lucrative, multi billion dollar expanding nuclear sector), have made the money put into PR and lobbying by the tobacco companies appear miniscule. Perhaps such a level of spending and propaganda is not surprising because Harvey Wasserman, writer and activist, says this is an industry that can’t solve its waste problems, can’t operate without leaking radiation, can’t pay for itself and can’t get private insurance against terror or error.

#### IFR’s are like every new reactor in history – costlier, slower, and less feasible than claimed on paper – view their evidence with a high degree of skepticism, empirics are on our side

Lovins, 9 – co-founder, chairman and chief scientist of Rocky Mountain Institute (Amory B, 3/21. ““New” nuclear reactors, same old story.” http://www.rmi.org/Knowledge-Center/Library/2009-07\_NuclearSameOldStory)

No new kind of reactor is likely to be much, if at all, cheaper than today’s LWRs, which remain grossly uncompetitive and are getting more so despite five decades of maturation. “New reactors” are precisely the “paper reactors” Admiral Rickover described in 1953:

An academic reactor or reactor plant almost always has the following basic characteristics: (1) It is simple. (2) It is small. (3) It is cheap. (4) It is light. (5) It can be built very quickly. (6) It is very flexible in purpose. (7) Very little development will be required. It will use off-the-shelf components. (8) The reactor is in the study phase. It is not being built now.

On the other hand a practical reactor can be distinguished by the following characteristics: (1) It is being built now. (2) It is behind schedule. (3) It requires an immense amount of development on apparently trivial items. (4) It is very expensive. (5) It takes a long time to build because of its engineering development problems. (6) It is large. (7) It is heavy. (8) It is complicated.

*Every* new type of reactor in history has been costlier, slower, and harder than projected. IFRs’ low pres­sure, different safety profile, high temperature, and potentially higher thermal efficiency (if its helium turbines didn’t misbehave as they have in all previous reactor projects) come with countervailing disadvantages and costs that advocates assume away, contrary to all experience.

## Nuclear Ldrshp

### No Prolif 2NC

#### Their authors exaggerate

Farley 11, assistant professor at the Patterson School of Diplomacy and International Commerce at the University of Kentucky, (Robert, "Over the Horizon: Iran and the Nuclear Paradox," 11-16, [www.worldpoliticsreview.com/articles/10679/over-the-horizon-iran-and-the-nuclear-paradox](http://www.worldpoliticsreview.com/articles/10679/over-the-horizon-iran-and-the-nuclear-paradox))

But states and policymakers habitually overestimate the impact of nuclear weapons. This happens among both proliferators and anti-proliferators. Would-be proliferators seem to expect that possessing a nuclear weapon will confer “a seat at the table” as well as solve a host of minor and major foreign policy problems. Existing nuclear powers fear that new entrants will act unpredictably, destabilize regions and throw existing diplomatic arrangements into flux. These predictions almost invariably turn out wrong; nuclear weapons consistently fail to undo the existing power relationships of the international system. The North Korean example is instructive. In spite of the dire warnings about the dangers of a North Korean nuclear weapon, the region has weathered Pyongyang’s nuclear proliferation in altogether sound fashion. Though some might argue that nukes have “enabled” North Korea to engage in a variety of bad behaviors, that was already the case prior to its nuclear test. The crucial deterrent to U.S. or South Korean action continues to be North Korea’s conventional capabilities, as well as the incalculable costs of governing North Korea after a war. Moreover, despite the usual dire predictions of nonproliferation professionals, the North Korean nuclear program has yet to inspire Tokyo or Seoul to follow suit. The DPRK’s program represents a tremendous waste of resources and human capital for a poor state, and it may prove a problem if North Korea endures a messy collapse. Thus far, however, the effects of the arsenal have been minimal. Israel represents another case in which the benefits of nuclear weapons remain unclear. Although Israel adopted a policy of ambiguity about its nuclear program, most in the region understood that Israel possessed nuclear weapons by the late-1960s. These weapons did not deter Syria or Egypt from launching a large-scale conventional assault in 1973, however. Nor did they help the Israeli Defense Force compel acquiescence in Lebanon in 1982 or 2006. Nuclear weapons have not resolved the Palestinian question, and when it came to removing the Saddam Hussein regime in Iraq, Israel relied not on its nuclear arsenal but on the United States to do so -- through conventional means -- in 2003. Israeli nukes have thus far failed to intimidate the Iranians into freezing their nuclear program. Moreover, Israel has pursued a defense policy designed around the goal of maintaining superiority at every level of military escalation, from asymmetrical anti-terror efforts to high-intensity conventional combat. Thus, it is unclear whether the nuclear program has even saved Israel any money. The problem with nukes is that there are strong material and normative pressures against their use, not least because states that use nukes risk incurring nuclear retaliation. Part of the appeal of nuclear weapons is their bluntness, but for foreign policy objectives requiring a scalpel rather than a sledgehammer, they are useless. As a result, states with nuclear neighbors quickly find that they can engage in all manner of harassment and escalation without risking nuclear retaliation. The weapons themselves are often more expensive than the foreign policy objectives that they would be used to attain. Moreover, normative pressures do matter. Even “outlaw” nations recognize that the world views the use of nuclear -- not to mention chemical or biological -- weapons differently than other expressions of force. And almost without exception, even outlaw nations require the goodwill of at least some segments of the international community. Given all this, it is not at all surprising that many countries eschew nuclear programs, even when they could easily attain nuclear status. Setting aside the legal problems, nuclear programs tend to be expensive, and they provide relatively little in terms of foreign policy return on investment. Brazil, for example, does not need nuclear weapons to exercise influence in Latin America or deter its rivals. Turkey, like Germany, Japan and South Korea, decided a long time ago that the nuclear “problem” could be solved most efficiently through alignment with an existing nuclear power. Why do policymakers, analysts and journalists so consistently overrate the importance of nuclear weapons? The answer is that everyone has a strong incentive to lie about their importance. The Iranians will lie to the world about the extent of their program and to their people about the fruits of going nuclear. The various U.S. client states in the region will lie to Washington about how terrified they are of a nuclear Iran, warning of the need for “strategic re-evaluation,” while also using the Iranian menace as an excuse for brutality against their own populations. Nonproliferation advocates will lie about the terrors of unrestrained proliferation because they do not want anyone to shift focus to the manageability of a post-nuclear Iran. The United States will lie to everyone in order to reassure its clients and maintain the cohesion of the anti-Iran block. None of these lies are particularly dishonorable; they represent the normal course of diplomacy. But they are lies nevertheless, and serious analysts of foreign policy and international relations need to be wary of them. Nonproliferation is a good idea, if only because states should not waste tremendous resources on weapons of limited utility. Nuclear weapons also represent a genuine risk of accidents, especially for states that have not yet developed appropriately robust security precautions. Instability and collapse in nuclear states has been harrowing in the past and will undoubtedly be harrowing in the future. All of these threats should be taken seriously by policymakers. Unfortunately, as long as deception remains the rule in the practice of nuclear diplomacy, exaggerated alarmism will substitute for a realistic appraisal of the policy landscape.

#### No domino theory—nonproliferation has zero utility

Potter 8 William C. Potter is Sam Nunn and Richard Lugar Professor of Nonproliferation Studies and Director of the James Martin Center for Nonproliferation Studies at the Monterey Institute of International Studies, Summer 2008, Divining Nuclear Intentions, http://muse.jhu.edu/journals/international\_security/v033/33.1.potter.pdf

Hymans is keenly aware of the deficiency of past proliferation projections, which he attributes in large part to the “tendency to use the growth of nuclear capabilities, stances toward the non-proliferation regime, and a general ‘roguishness’ of the state as proxies for nuclear weapons intentions” (p. 217). Such intentions, he believes, cannot be discerned without reference to leadership national identity conceptions, a focus that appears to have been absent to date in intelligence analyses devoted to forecasting proliferation.49 Hymans is equally critical of the popular notion that “the ‘domino theory’ of the twenty-first century may well be nuclear.”50 As he points out, **the new domino theory, like its discredited Cold War predecessor, assumes an oversimplified view about why and how decisions to acquire nuclear weapons are taken**.51 **Leaders’ nuclear preferences**, he maintains, “**are not** highly **contingent on what other states decide**,” and, therefore, “**proliferation tomorrow will** probably **remain as rare as proliferation today, with no single instance of proliferation causing a cascade of nuclear weapons states**” (p. 225). In addition, he argues, the domino thesis embraces “an exceedingly dark picture of world trends by lumping the truly dangerous leaders together with the merely self assertive ones,” and equating interest in nuclear technology with weapons intent (pp. 208209). Dire proliferation forecasts, both past and present, Hymans believes, flow from four myths regarding nuclear decisonmaking: (1) states want the bomb as a deterrent; (2) states seek the bomb as a “ticket to international status”; (3) states go for the bomb because of the interests of domestic groups; and (4) the international regime protects the world from a flood of new nuclear weapons states (pp. 208216). Each of these assumptions is faulty, Hymans contends, because of its fundamental neglect of the decisive role played by individual leaders in nuclear matters. As discussed earlier, Hymans argues that the need for a nuclear deterrent is entirely in the eye of the beholder—a leader with an oppositional nationalist NIC. By the same token, just because some leaders seek to achieve interna tional prestige through acquisition of the bomb, it does not mean that other leaders “necessarily view the bomb as the right ticket to punch”: witness the case of several decades of Argentine leaders, as well as the Indian Nehruvians (pp. 211212). The case of Egypt under Anwar al-Sadat, though not discussed by Hymans, also seems to at this category. Hymans’s focus on the individual level of analysis leads him to discount bu reaucratic political explanations for nuclear postures, as well. Central to his argument is the assumption that decisions to acquire nuclear weapons are taken “without the considerable vetting that political scientists typically assume precedes most important states choices” (p. 13). As such, although he is prepared to credit nuclear energy bureaucracies as playing a supporting role in the ef forts by Australia, France, and India to go nuclear, he does not observe their influence to be a determining factor in root nuclear decisions by national lead ers. Moreover, contrary to a central premise of Solingen’s model of domestic political survival, Hymans ands little evidence in his case studies of leaders pursuing nuclear weapons to advance their political interests (p. 213). For ex ample, he argues, the 1998 nuclear tests in India were as risky domestically for Vajpayee as they were internationally (p. 214). Most provocatively, Hymans invokes an individual-centric mode of **analysis** to **challenge** **the necessity and utility of a strong international nonproliferation regime**. As discussed in a preceding section, **he finds no evidence that the NPT regime prevented any** of the **leaders who desired nuclear weapons from pursuing them**.

### Prolif Leadership Fails 2NC

#### They can’t solve nuclear leadership or proliferation – multiple reasons:

#### First – it’s an outdated tool – tech for proliferation is already widespread – US has limited influence and can hardly deter – that’s Weiss. Prefer our evidence – theirs assumes the peak of nuke power development when supply was limited.

#### Second – hypocrisy – US push for non-enriched nuclear power causes blowback of its contradictory stance – that’s Caldicott. States will use this as a tool to ignore the US.

#### Third – waste management – it shows that US has poor technology making the US an international standard for failed nuclear power – that’s Moniz.

#### US won’t exert prolif leadership

Cleary 12 (Richard Cleary, American Enterprise Institute Research Assistant, 8/13/12, Richard Cleary: Persuading Countries to Forgo Nuclear Fuel-Making, npolicy.org/article.php?aid=1192&tid=30)

The cases above offer a common lesson: The U.S., though constrained or empowered by circumstance, can exert considerable sway in nonproliferation matters, **but** often **elects not to apply the most powerful tools at its disposal for fear of jeopardizing other objectives**. The persistent dilemma of how much to emphasize nonproliferation goals, and at what cost, has contributed to cases of **nonproliferation failure**. The inconsistent or incomplete application of U.S. power in nonproliferation cases is most harmful when it gives the impression to a nation that either sharing sensitive technology or developing it is, or will become, acceptable to Washington. **U.S. reticence** historically, with some exceptions, **to prioritize nonproliferation**—and in so doing reduce the chance of success in these cases—**does not leave room for** great **optimism about future U.S. efforts at persuading countries to forgo nuclear fuel-making**.

#### A couple of distinctions why prolif leadership fails –

#### First – the aff can’t solve simply through benign tech transfer—IF economics were the only thing that drove nuclear plant decisions, then obviously there would never be prolif because it’s EXPENSIVE

Lewis 12 (Jeffrey Lewis, director of the East Asia Nonproliferation Program at the James Martin Center for Nonproliferation, 8/1/12, It's Not as Easy as 1-2-3, www.foreignpolicy.com/articles/2012/08/01/it\_s\_not\_as\_easy\_as\_1\_2\_3?page=full)

Creating market incentives to discourage the spread of enrichment and reprocessing seems like a reasonable thing to do - **except that most states make nuclear decisions on something other than a cost basis**. Nuclear power enthusiasts have been no strangers to wishful thinking, starting with claims that nuclear energy would be "too cheap to meter." Government decisions about nuclear power tend to **prioritize** concerns about **sovereignty** and keeping technological pace with neighbors. It is not hard to see national nuclear programs as something akin to national airlines - money-losing prestige projects that barely take market forces into account. Often, aspiring nuclear states look to countries like the United States and Japan as models. If such countries invest heavily in fuel-cycle services, developing states might **try to copy** them **rather than** simply **become** their **customers**.

#### Second---if the US tried to constrain nuclear tech at all, countries wouldn’t buy our IFRs—supply side restrictions fail because of other suppliers

Cleary 12 (Richard Cleary, American Enterprise Institute Research Assistant, 8/13/12, Richard Cleary: Persuading Countries to Forgo Nuclear Fuel-Making, npolicy.org/article.php?aid=1192&tid=30)

The examples above show the limitations of both demand and supply side efforts. Supply side diplomatic interventions, made before the transfer of technology, have been at times effective, particularly in precluding nuclear fuel-making in the short term and buying time for more lasting solutions. However, as the Pakistan and Brazil cases illustrated, supply side interventions are no substitute for demand side solutions: **Countries face political choices regarding nuclear fuel-making**. **A nation set upon an independent fuel-making capacity**, such as Pakistan or Brazil, **is unlikely to give up efforts because of supply side controls**. Multilateral fuel-making arrangements, as proposed repeatedly by the United States, have not materialized and therefore seem to have had little tangible influence.

#### The US can’t influence nuclear trade – key governments don’t support nonprolif regulations and other countries fill in

**Kerr et al, 11** – Analyst in Nonproliferation, Congressional Research Service (Paul K, with Mark Holt, Specialist in Energy Policy, and Mary Beth Nikitin, Specialist in Nonproliferation, 8/10. “Nuclear Energy Cooperation with Foreign Countries: Issues for Congress.” CRS Report for Congress. http://fpc.state.gov/documents/organization/171374.pdf)

The ability of the United States to influence regulations for international nuclear commerce have arguably diminished. As discussed above, the U.S. nuclear industry’s market power has declined and foreign competitors have been concluding nuclear supply agreements with other countries. Moreover, some influential governments have demonstrated limited enthusiasm for such regulations. For example, as noted, some members of the NSG displayed resistance to proposals that would restrict the transfer of enrichment and reprocessing technology. Furthermore, the NSG decided in 2008 to exempt India from some of its export guidelines—a step which many observers argued would assist New Delhi’s nuclear weapons program. 85 Some suppliers may use the 2008 decision to justify supplying other states that do not meet NSG guidelines; indeed, China has agreed to supply Pakistan with two additional nuclear reactors. 86 It is also possible that Israel and Pakistan, which, like India, do not have full-scope safeguards and have not signed the NPT, may continue to ask for exemptions from NSG guidelines. For its part, Israel proposed export criteria in 2007 that would have had the effect of exempting Israel from the current NSG guidelines 87 and is widely believed to have sought a nuclear cooperation agreement with the United States.

#### There’s only a risk they increase prolif, not solve it – prefer our evidence, it includes both qualitative and quantitative analysis

**Fuhrmann, 9** – Assistant Professor of Political Science at the University of South Carolina (Matthew, Summer. “Spreading Temptation: Proliferation and Peaceful Nuclear Cooperation.” International Security Vol. 34, No. 1. MIT Press Journals.)

This article examines the relationship between peaceful nuclear cooperation and nuclear weapons proliferation**.** Speciacally, it explores whether countries receiving civilian nuclear aid over time are more likely to initiate weapons pro- grams and build the bomb. The conventional wisdom is that civilian nuclear cooperation does not lead to proliferation. Most scholars argue that nu- clear weapons spread when states have a demand for the bomb—not when they have the technical capacity to proliferate.4 Those who recognize the im- portance of the supply side of proliferation argue that certain types of nuclear assistance enable countries to build nuclear weapons but that others are innoc- uous or even positive from a nonproliferation standpoint. Nuclear suppliers, for instance, generally restrict the sale of uranium enrichment or plutonium re- processing facilities because these can be used directly to produce assile mate- rial for a bomb, but suppliers routinely build research or power reactors in other countries and train foreign scientists.5 A recent study ands that countries receiving enrichment and reprocessing facilities, bomb designs, or signiacant quantities of weapons-grade assile material are more likely to acquire the bomb.6 The implication of this research is that other forms of atomic assistance do not lead to the spread of nuclear weapons. This article argues that the conventional wisdom is wrong—and dangerous. All types of civilian nuclear assistance raise the risks of proliferation. Peaceful nuclear cooperation and proliferation are causally connected because of the dual-use nature of nuclear technology and know-how.7 Civilian cooperation provides technology and materials necessary for a nuclear weapons program and helps to establish expertise in matters relevant to building the bomb. I de- velop four hypotheses based on this general insight. First, receiving civilian nuclear assistance over time increases the likelihood that states will begin nu- clear weapons programs because it reduces the expected costs of such a cam- paign and inspires greater conadence among leaders that the bomb could be successfully developed. Second, militarized disputes with other countries con- dition the effect of civilian nuclear assistance on program initiation. The likeli- hood that nuclear assistance causes countries to begin weapons programs increases as their security environments worsen. Third, peaceful aid increases the probability that countries will successfully build nuclear weapons. Fourth, this is especially true when a country’s security environment deteriorates. To test these hypotheses, I produced a data set on civilian nuclear assistance based on the coding of all NCAs signed from 1945 to 2000.8 A combination of qualitative and quantitative analysis yields support for my arguments, even when controlling for the other variables thought to influence proliferation. The results from my statistical analysis indicate that other factors, such as indus- trial capacity and membership in the nuclear Nonproliferation Treaty (NPT), also have signiacant effects on proliferation. But peaceful cooperation is among the few variables that is consistently salient in explaining both nuclear weapons program onset and weapons acquisition.

### Prolif Turn 2NC – General

#### Extend the proliferation turn – IFRs make every aspect of making nuclear weapons easier. They provide the supply, infrastructure, and expertise – that’s Lovins.

#### A few key framing issues at the top –

#### First – their evidence assumes hypothetical blueprints of IFRs – their own author concludes neg and says actual implementation spurs proliferation

Green 9 (Dr. Jim, Senior Vice President for Resource Development – United Way of the Greater Triangle, “Nuclear Weapons and 'Fourth Generation' Reactors,” Friends of the Earth Australia, July, http://www.foe.org.au/anti-nuclear/issues/nfc/power-weapons/g4nw)

In short, IFRs could produce lots of greenhouse-friendly energy and while they're at it they can 'eat' nuclear waste and convert fissile materials, which might otherwise find their way into nuclear weapons, into useful energy. Too good to be true? Sadly, yes. Nuclear engineer Dave Lochbaum from the Union of Concerned Scientists writes: "The IFR looks good on paper. So good, in fact, that we should leave it on paper. For it only gets ugly in moving from blueprint to backyard." Complete IFR systems don't exist. Fast neutron reactors exist but experience is limited and they have had a troubled history. The pyroprocessing and waste transmutation technologies intended to operate as part of IFR systems are some distance from being mature. But even if the technologies were fully developed and successfully integrated, IFRs would still fail a crucial test − they can too easily be used to produce fissile materials for nuclear weapons. IFRs and nuclear weapons George Stanford, who worked on an IFR R&D program in the US, notes that proliferators "could do [with IFRs] what they could do with any other reactor − operate it on a special cycle to produce good quality weapons material."

#### Second – their evidence is comparative between other reactors, not the status quo. Yes – the IFR is more proliferation resistant than other reactors, but not the status quo.

#### We control uniqueness – probability for prolif is low because of lack of access to weapons material. They remove the main obstacle to proliferation

Thränert 9 (Oliver, Head of the Security Policy Research Group – German Institute of International Security Affairs, “The New Appeal of Nuclear Energy and the Dangers of Proliferation,” Center for Security Studies, No. 57, July, http://www.css.ethz.ch/publications/pdfs/CSS-Analyses-57.pdf)

Indeed, it is indisputable that nuclear energy programs entail proliferation dangers. As long as a country only operates nuclear reactors, these dangers may not be dramatic. But when uranium enrichment and nuclear reprocessing are added to the equation, the problems increase drastically. Both of these technologies are well suited for producing weapons-grade fissile material. This is the main obstacle to be overcome by any country that wants to build nuclear bombs. At the same time, the spread of nuclear energy tends to increase the danger of nuclear terrorism. In the interest of continued guaranteed access to the unequivocally peaceful use of atomic power, international efforts will be required to exclude misuse for military purposes as far as possible. A debate on these issues, for instance on the internationalization of the nuclear fuel cycle, is already underway, but no comprehensive solutions are on the horizon yet.

### No Israel Strike 2NC

#### No strikes – and this doesn’t assume that Iran is rational

Rubin, 1/26/12 – professor at the Interdisciplinary Center in Herzliya, Israel, the Director of the Global Research and International Affairs (GLORIA) Center, and a Senior Fellow at the International Policy Institute for Counterterrorism (Barry, “Israel Isn’t Going to Attack Iran and Neither Will the United States.” http://pjmedia.com/barryrubin/2012/01/26/israel-is-not-about-to-attack-iran-and-neither-is-the-united-states-get-used-to-it/)

Yet given the points made above, even the Iran-as-irrational analysis — and even assuming it to be correct, the probability of being right about Iran ever trying to launch a nuclear attack is far lower than 100 percent — does not justify an Israeli attack at this time. And, finally, Israel has other options.  The alternative is this:  As the Iranian regime works hard to get nuclear weapons and missiles capable of carrying them, Israel uses the time to build a multi-level defensive and offensive capability. These layers include: U.S. early warning stations and anti-missile missile installations in the Gulf; Israeli missile-launching submarines; Israeli long-range planes whose crews have rehearsed and planned for strikes at Iranian facilities; different types of anti-missile missiles capable of knocking down the small number of missiles Iran could fire simultaneously;  covert operations, possibly including computer viruses and assassinations, to slow down Iran’s development of nuclear weapons; improved intelligence; help to the Iranian opposition (though the idea of “regime change” in the near future is a fantasy); and other measures. If and when there was a clear Iranian threat to attack Israel, then Israel could launch a preemptive assault. And if no such threat ever materializes, Israel need never attack. Any future Iran-Israel war will happen if Iran’s regime makes it unavoidable, not in theory but in actual practice. Note that attacking a limited number of missiles and launch facilities, that must be located closer to Israel within Iranian territory, is easy. Attacking multiple nuclear facilities buried deep in the ground anywhere in Iran is hard. Ah, but what if Iran gives small nuclear devices to terrorists? Well ask yourself two simple questions: 1. Would an Israeli attack on Iran ensure that this didn’t happen? Answer: Not at all. 2. Would an Israeli attack on Iran ensure that Iran would definitely give nuclear devices to terrorists and try to strike against Israel as quickly and as frequently as possible? Absolutely yes. Does an Israeli strategy of not launching an attack assume that Iran’s regime is “rational” and “peace-loving” and will be deterred by Israel’s ability to strike back? Absolutely not. Indeed, quite the opposite. No such assumption is required. Israel will simply be ready and alert based on the assumption that Iran might attack some day. But such a war, however possible, is not inevitable. And since Israel cannot prevent Iran from obtaining nuclear weapons by attacking, there is no point in doing so.

#### No strikes – Israel’s just saber rattling – it doesn’t have the capacity or confidence

Xinhua, 11/7/11 (“Israel unlikely to strike Iran without alerting U.S.” http://news.xinhuanet.com/english2010/world/2011-11/07/c\_122243128.htm)

The Israeli ambiguity over a possible air strike on Iran's alleged nuclear weapons program continues as the United Nations nuclear agency, the International Atomic Energy Agency (IAEA), is scheduled to release its report on Iran's nuclear activity later this week. Western and Middle Eastern countries are all concerned that Iran is using its intentions for civilian use of nuclear energy as a cover for producing nuclear weapons. Israel considers the issue an existential threat, owing to numerous statements by Iranian President Mahmoud Ahmadinejad and other leaders calling for destruction of the Jewish State. The U.S. administration has lately been asking Israel to clarify its position on a possible military strike, perhaps even without alerting Washington beforehand. During a visit to Israel in October, U.S. Defense Secretary Leon Panetta met with Prime Minister Benjamin Netanyahu and Defense Minister Ehud Barak. Panetta, however, reportedly left without a clear answer regarding Israel's true intentions. "It's very hard for me to see them (strike Iran) without coordination with the U.S.," Prof. Joshua Teitelbaum, of the Interdisciplinary-Center in Herzliya, told Xinhua. "It's such a big thing and it would involve crossing airspace where the U.S. is active in. They would need some kind of coordination with the Americans to do this," he said. In addition, an Iranian retaliation could target U.S. ground forces stationed in Iraq and Kuwait, as well as the American naval base in Qatar, the professor said. SANCTIONS "There's an increasing sense of urgency on the issue now, and Israel is becoming more outspoken about it as a way to pressure the U.S. and other countries," Teitelbaum said. "The saber rattling serves to increase the urgency." He argued that, for the U.S., which also pushes for tougher sanctions against Iran, the image of Israel as a nervous, unpredictable country could serve Washington's agenda, warning United Nations Security Council members to take action -- before Israel does. Israel seems to be trying to project an image of a state with its "back against the wall," he argued, one that might take radical steps if it feels threatened. In the long run, however, Israel's best bet would be to take on a role as part of a collective international effort, and not as a unilateral actor, Teitelbaum said. He added that when it comes to the military capabilities, "the assessment is that Israel can't do as much as the U.S. could." While the Israel Air Force (IAF) in 1981 launched a successful raid on an Iraqi nuclear reactor, a mission to Iran is a completely different story. In Iraq there was only one target, as opposed to Iran where the alleged nuclear facilities are spread over the country and in some cases hidden underground. REFOCUSING THE AGENDA Prof. Shlomo Aronson, of the Hebrew University in Jerusalem, said that Netanyahu and Barak want to shift international attention to Iran, and to do this they "agreed upon putting the military option on the table." "They have to make the military threats more visible without having made any decision to attack Iran, because this goes beyond the capabilities of Israel's air force and army," Aronson said. The IAF is currently equipped with the American-made F-15 and F- 16 fighters, which lack the long-range capability to strike targets as far away as Iran without refueling midair. While Israel has ordered a squadron -- 19 planes -- of the new U.S.-made F-35 fighter jets, the first ones are scheduled to arrive no earlier than 2016.

#### No strikes – their evidence is unverified speculation

Golan, 1/17/12 – veteran Israeli journalist, former editor-in-chief of Ha'aretz and Globes (Matti, “Israel won't attack Iran without US go-ahead.” http://www.globes.co.il/serveen/globes/docview.asp?did=1000716538&fid=411)

What is really going on between Israel and the US over Iran? Is what we read and hear all that there is? In other words, is Israel really planning to attack Iran without coordination with the US? Does Washington really oppose an Israeli attack on Iran? eports say yes, that is exactly the case. But these reports do not meet my test of common sense, and at the margins the reports, at least to me, do not make sense. For example, reports that the US is protecting its facilities and bases in Europe on the basis of an assessment that Israel will attack Iran and that a counterattack would soon follow. I read these reports that the US has accepted the possibility of an Israeli attack, and that all the superpower can say in the matter is that it is readying for such a possibility. Protection? That's a response? I would expect that alongside protecting its facilities, the US would press Israel not to attack; and not just the usual and not-so-painful pressure, but measures that fit the deed. After all, an Israeli attack would result in an Iranian response. What this response would entail, and whether it would target Israel or other countries as well - this cannot be known, but it is possible. The US knows this - how could it not know - and its response is to protect facilities? Not a full assault on Israel with all the means at its disposal (non-military means of course)? Behind the scenes? Obviously, there are people who will say that the US is undoubtedly doing just this behind the scenes. I don’t buy it. I know a bit about how these things work, and the accepted way to work is both behind the scenes and on the front stage. If there were real and serious pressures, we would know about them. The US would make sure that we know, because it would undoubtedly want to create public opinion, which is an integral part of managing pressure. The bottom line that I want to reach is that if there are disagreements between Israel and the US, they are at the margins. I believe that there is no such thing that Israel would embark on an action with such severe consequences, possibly even existential consequences, without coordination with the US. There is no such thing, in my opinion, that President Barack Obama will be woken up one night with the news of an Israeli attack. If Israel were to attack, it will be with his consent, support, and knowledge. So how do I explain the many reports that Israel will launch an attack without coordinating it with the US? It seems like a game to me. It's objective? Many to give the US an alibi, as if it didn’t know, in order to avoid a confrontation with Iran; maybe it's a smokescreen to conceal the real contacts and agreements between Washington and Jerusalem; and maybe it's disinformation targeting Iran. Everything is possible, except for one thing: that Israel would attack Iran without coordinating it with the world's great power and Israel's only friend. It does not matter what is said and asserted, I don’t believe it.

Even if it happened – wouldn’t cause extinction

Riedel 12 – Senior Fellow in the Saban Center for Middle East Policy at the Brookings Institution and a professor at Georgetown University (Bruce, 01/20, “Iran is not an existential threat,” http://thedailynewsegypt.com/global-views/iran-is-not-an-existential-threat.html)

The danger of war is growing again over Iran's nuclear ambitions. Iran is rattling its sabers, the Republican presidential candidates and others are rattling theirs. But even if Iran gets the bomb, Israel will have **overwhelming** military superiority over Iran, a fact that should not be lost in all the heated rhetoric. Former head of the Mossad, Meir Dagan, says Iran won't get the bomb until at least 2015. In contrast, Israel has had nuclear weapons since the late 1960s and has jealously guarded its monopoly on them in the region. Israel has used force in the past against developing nuclear threats. Iraq in 1981 and Syria in 2007 were the targets of highly effective Israeli air strikes against developing nuclear weapons programs. Israel has **seriously considered** conducting such a strike against Iran and may well do so especially now that it has special bunker-busting bombs from the US. Estimates of the size of the Israeli arsenal by international think tanks generally concur that Israel has about 100 nuclear weapons, possibly 200. Even under a crash program, Iran won't achieve an arsenal that size for many years — perhaps **decades**. Israel also has multiple delivery systems. It has intermediate range ballistic missiles, the Jericho, that are capable of reaching **any target** in Iran. Its fleet of F15 long-range strike aircraft can also deliver nuclear payloads. Some analysts have suggested that it can also deliver nuclear weapons from its German-made Dolphin submarines using cruise missiles. Israel will also continue to have conventional military superiority over Iran and the rest of the region. The Israel Defense Forces has a demonstrated qualitative edge over all of its potential adversaries in the region, including Iran. The Israeli air force has the capability to penetrate air defense systems with virtual impunity as it demonstrated in 2007 when it destroyed Syria's nascent nuclear capability. The IDF's intelligence and electronic warfare capabilities are vastly superior to its potential rivals. The 2006 Lebanon war and the 2009 Gaza war demonstrated that there are limits to Israel's conventional capabilities but those limits should not obscure the underlying reality of Israel's conventional military superiority over its enemies. Iran, on the other hand, has never fully rebuilt its conventional military from the damage suffered in the Iran-Iraq war. It still relies heavily for air and sea power on equipment purchased by the Shah 40 years ago, much of which is antique today. Moreover, the June 2010 United Nations sanctions, UN Security Council resolution 1929, impose a very stringent arms ban on Iran. Virtually **all** significant weapons systems — tanks, aircraft, naval vessels, missiles, etc — are banned from sale or transfer to Iran. Training and technical assistance for such systems is also banned. In other words, even if Iran wants to try to improve its conventional military capability in the next few years and has the money to do so, the UN arms ban will make that close to impossible. Iran does not have the capability to produce state-of-the-art weapons on its own, despite its occasional claims of self-sufficiency. It certainly cannot build a modern air force to compete with the IDF on its own. Finally, Israel will continue to enjoy the support of the world's only superpower for the foreseeable future. Assistance from the United States includes roughly $3 billion in aid every year. That is the longest running financial assistance program in American history, dating back to the 1973 war. It is never challenged or cut by Congress and permits Israeli planners to do multi-year planning for defense acquisitions with great certitude about what they can afford to acquire. When Texas Governor Rick Perry suggested cutting aid to Israel to zero in one Republican debate, his poll numbers plummeted. He backtracked fast. US assistance is also far more than just financial aid. The Pentagon and Israel engage in constant exchanges of technical cooperation in virtually all elements of the modern battle field. Missile defense has been at the center of this exchange for over 20 years now. The United States and Israel also have a robust and dynamic intelligence relationship, which helps ensure Israel's **qualitative** edge. Every American president from Richard Nixon to Barack Obama has been a supporter of maintaining Israel's qualitative edge over its potential foes, including US allies like Egypt and Saudi Arabia. Iran, in contrast, has no major power providing it with financial help. Its arms relationships with Russia and China have been severed by Security Council Resolution 1929. Its only military ally is Syria, not exactly a powerhouse. And Syria is now in the midst of a civil war; its army is dissolving. If President Bashar Al-Assad falls, Iran is the biggest loser in the "Arab spring". Hezbollah will be the second largest loser. The deputy secretary general of Hezbollah and one of its founders, Sheikh Naim Qassem, wrote in 2007 that Syria is "the cornerstone" of Hezbollah’s survival in the region. While Syria and Hezbollah have their differences, the relationship is a "necessity" for Hezbollah. So don't let the hot air from Tehran or the Republican debates confuse the reality on the ground. Iran is a dangerous country but it is **not an existential threat** to either Israel or America.

### AT Peak Uranium 2NC

#### Cards also about rare earth – you can’t solve

**Konstantiov 12 –** professor of math at Moscow State and member of numerous scientific/geological councils

(Mihail Konstantiov, Professor of Mathematics with the University of Architecture, Civil Engineering and Geodesy (UACEG), Bulgaria, Vice-Chancellor of UACEG (1999-2003), Member of scientific councils and commissions, Member of the Board of IICREST. He has authored 30 books and over 500 scientific papers. He has participated in international scientific projects of EU and NATO and realized research and lecturing visits in British, German and French universities. Prof. Konstantinov has been Member and Vice Chair of the Central Election Commission of Bulgaria and Voting coordinator of OSCE (1997-) as well as the Bulgarian representative at the Council of Europe on electronic voting. In addition to his scientific publications, he has authored more than 300 articles in Bulgarian editions devoted to social and political issues with emphasis on election practice and legislation., “Uranium time bomb ticking”, Europost, 2-11-2012, http://www.europost.bg/article?id=3763)

In 1945, the US had three nucle­ar bombs - two plu­to­ni­um-based devi­ces and a ura­ni­um-based one. The first one was det­o­nat­ed on a test site in New Mex­i­co, and the sec­ond and third ones over Jap­a­nese ter­ri­to­ry. On 6 August 1945, the then-only ura­ni­um-based bomb was thrown over the Jap­a­nese city of Hiro­shi­ma. What hap­pened is well known and I will not re-tell it. More­over, this sto­ry deals with nucle­ar weap­ons but they are not the main char­ac­ters. Almost 20 years ago, an agree­ment was inked under which the US under­took to help dis­man­tle Rus­sian nucle­ar war­heads and con­vert the ura­ni­um from them into fuel for nucle­ar reac­tors. The rea­son is sim­ple - the pro­ce­dure is expen­sive, Rus­sia was weak and poor at the time, and in addi­tion, Amer­i­can tech­nol­o­gy back then was sig­nif­i­cant­ly ahead of the Rus­sian one. The amounts of con­vert­ed ura­ni­um are mas­sive - more than 500 ton­nes. Thus Rus­sian ura­ni­um turns into fuel for US nucle­ar pow­er plants. At present, this fuel is used to pro­duce 10% of the elec­tri­cal pow­er in the US. This is more than the ener­gy pro­duced from renew­a­ble sour­ces, such as sun, wind and water, there. This idyll, how­e­ver, is com­ing to its end. First, the US-Rus­sia agree­ment for Rus­sian war­heads con­ver­sion expires next year and Rus­sia is high­ly unlike­ly to extend it. More­over, Rus­sians now have good tech­nol­o­gy for that pur­pose and will prob­a­bly want to leave their ura­ni­um for them­selves. And sec­ond, if the agree­ment is extend­ed, the amounts of war­heads sub­ject to dis­man­tling will soon be exhaust­ed any­way as the agreed lim­its are reached. Glob­al mar­kets have already start­ed sus­pect­ing what is going to hap­pen with the expir­ing US-Rus­sia agree­ment for war­head ura­ni­um. And not only with it. Indeed, ura­ni­um oxide pri­ces have gone wild sur­ging to almost $70/lb (1lb is 454 gr.) in Jan­u­ary this year from $40/lb in Sep­tem­ber 2011. Such a 70% ral­ly in ura­ni­um price over just 3-4- months is not sus­tain­a­ble and even a cer­tain edg­ing down can be expect­ed. Still, the trend is clear - ura­ni­um dearth is loom­ing, as well as dearth of oth­er stra­te­gic nat­u­ral resour­ces. We have repeat­ed­ly stat­ed this but let us under­score it again. The glob­al cri­sis is most of all a resource cri­sis. It is finan­cial inso­far as it has became clear that the sys­tem allow­ing some peo­ple to print mon­ey while oth­ers work and bring them oil and oth­er goods will not last for good. The antic­i­pat­ed ura­ni­um short­age in the com­ing dec­ade is tru­ly strik­ing and is esti­mat­ed at 500m lb! One of the rea­sons is the fast devel­op­ing econ­o­mies of Chi­na and India, along with oth­er coun­tries like Bra­zil and Tur­key. It is where the bulk of the 147 reac­tors expect­ed to become oper­a­tion­al in these 10 years will be locat­ed. A major consum­er of ura­ni­um, the US cur­rent­ly has a demand for 60m lb a year but pro­du­ces only 3m lb. Still, this is the way things are at present. And what will hap­pen aft­er the US Nucle­ar Reg­u­la­to­ry Com­mis­sion reviews and poten­tial­ly approves new nucle­ar reac­tor pro­pos­als? They are 26 or so. And more are in the pipe­line. The sit­u­a­tion in India is even more dra­mat­ic - an increase in the share of nucle­ar ener­gy in elec­tric­i­ty pro­duc­tion is expect­ed from 2.5% at present to 25%. In oth­er words, India will need 10 times as much ura­ni­um as it does now if the far-reach­ing plan is put to prac­tice. Chi­na has more hum­ble aspi­ra­tions and is gear­ing to raise the share of nucle­ar facil­i­ties in elec­tric­i­ty pro­duc­tion only ...three times. And Chi­na, much like the US, does not have suf­fi­cient domes­tic sup­ply. We can con­tin­ue with sta­tis­tics, but things are evi­dent any­way. A war is around the cor­ner. In the best-case sce­nar­io, this will be a price war over ura­ni­um and in par­tic­u­lar ura­ni­um oxide. Pri­ces in the order of $100 or even $200/lb no longer seem far-fetched. Price lev­els of $500-$1000-$2000/lb have even been men­tioned and this will have its swift and dras­tic impli­ca­tions. Still, if a reac­tor costs $4bn, why not pay $1000/lb of ura­ni­um? Or else, the 4-bil­lion invest­ment will go down the drain. Anoth­er explod­ing glob­al mar­ket is the one for rare earth ele­ments with hard-to-pro­nounce Lat­in names such as Neo­dym­i­um, Ceri­um, Lan­tha­num, Gal­li­um, Gado­lin­i­um, Thu­li­um… If we have a look at Men­de­leev's peri­od­ic table, they are squeezed some­where at the bot­tom. But then, all the elec­tron­ics around us, all com­put­ers, fibre optics, all sat­el­lites and in gen­er­al every­thing under­ly­ing our high-tech civ­il­i­za­tion would be utter­ly impos­si­ble but for these exot­ic hard-to-extract ele­ments. The price of each of them has dou­bled and tri­pled in a year alone. And the pri­ces of some of them have soared six­fold in the same peri­od. Com­pared with rare earth ele­ments, gold and plat­i­num are like a tame kit­ten. It nat­u­ral­ly eats and swells but at a rate of only up to 40% a year. And what about the lith­i­um under­ly­ing the idea of elec­tric vehi­cles stag­ing a mass entrance into our dai­ly life and econ­o­my if and when oil is exhaust­ed? But it is in rare ele­ments where the secret of future skir­mish­es over resour­ces lies. Because across the world, they are real­ly hard to extract but Chi­na holds 97% of their glob­al pro­duc­tion! No mis­take, Chi­na pro­du­ces 33 times as much rare met­als as the rest of the world. This may as well be changed some day as cur­rent­ly huge efforts and mon­ey are put into look­ing for rare met­als around the globe. Hypo­thet­i­cal­ly, only a third of the res­erves is in Chi­na with the oth­er two thirds lying some­where else. Too bad it is any­one's guess where, although Cana­da, South Afri­ca and some Afri­can coun­tries are con­sid­ered prom­is­ing in this regard. Still, for the time being this is how things are: Chi­na has almost every­thing and the rest of the world hard­ly any­thing. Does any­one have any doubts why Chi­na has the ambi­tion to become the top dog? Of course, the world is by no means tread­ing water in one oth­er respect: sub­sti­tute tech­nol­o­gies are sought for that would not be so crit­i­cal­ly depend­ent on rare earth ele­ments, yet, more in the long rath­er than short run. By the way, why are we dis­cuss­ing ura­ni­um pri­ces along with all oth­er sorts of pri­ces in US dol­lars? The answer is clear: because the dol­lar is the glob­al reserve cur­ren­cy. The rea­son for this, though, is more com­pli­cat­ed. True, the US is the larg­est econ­o­my for the time being. But it is also among the most indebt­ed coun­tries in the world. And its debt is increas­ing­ly sur­ging. Still, this is not the most impor­tant. The most impor­tant thing is that the US has the most pow­er­ful, most mobile and one of the most effect­ive armies in the world. Lit­tle like­ly is it for some­one to reject the US dol­lar as a reserve cur­ren­cy while the 82nd Air­borne Divi­sion of the US Army, based at Fort Bragg North Car­o­li­na, is the holy ter­ror it is at the moment. And there is much more to it than the 82nd Divi­sion. So the time bomb of ura­ni­um and rare earth ele­ments dearth is tick­ing. And lit­tle idea do we have of the time it is set for. Or wheth­er, when it final­ly goes off, some­body might remem­ber the first mas­sive appli­ca­tion of ura­ni­um, which turned thou­sands into ash­es some 67 years ago. And be temp­ted to use it

#### No peak uranium – demand generates supply

**WSJ 9** (Keith Johnson, Wall Street Journal, 12/10. “Peak Uranium: More Reasons to Worry About Powering the Nuclear Revival.”  http://blogs.wsj.com/environmentalcapital/2009/12/10/peak-uranium-more-reasons-to-worry-about-powering-the-nuclear-revival/)

So is there cause for concern? MIT, in its benchmark evaluation of the outlook for the nuclear industry, brushes off concerns about uranium supplies. The IAEA figures the world has 5.5 million tons of uranium already identified—which would be about 80 years of supplies at today’s current pace. (Though the official estimates of supplies have their own share of critics.) And Harvard’s Belfer Center just summarized all the myriad challenges facing the nuclear revival–fuel supplies per se aren’t one of them. In the end, demand might just create its own supply. Just the talk of the nuclear renaissance has jazzed up uranium-mining companies and countries which spent a couple of decades treading water. And, as has been historically true with oil and is probably true with future supplies of lithium for electric-car batteries, there’s nothing like a supply crunch and rising commodity prices to spur new exploration and production. As The Economist noted recently, “Where there is an economic incentive to extract more of a resource, industry has a long history of developing technology to do it.”

#### Sufficient supply of uranium

MIT, 3 – Massachusetts Institute of Technology (Interdisciplinary study, “The Future of Nuclear Power,” http://mitei.mit.edu/system/files/nuclearpower-summary\_0.pdf)

Closed fuel cycles extend fuel supplies. The viability of the once-through alternative in a global growth scenario depends upon the amount of uranium resource that is available at economically attractive prices. We believe that the world-wide supply of uranium ore is sufficient to fuel the deployment of 1000 reactors over the next half century and to maintain this level of deployment over a 40 year lifetime of this fleet. This is an important foundation of our study, based upon currently available information and the history of natural resource supply.

#### Tech breakthroughs solve – scientists are on it

Rhodes, 12 (Miller, computer programmer citing the 244th National Meeting & Exposition of the American Chemical Society. “Scientists Making Advances In Tapping Uranium From Ocean.” http://www.empowernetwork.com/mrhodes/scientists-making-advances-in-tapping-uranium-from-ocean/?id=mrhodes)

Reporting at the 244th National Meeting & Exposition of the American Chemical Society, Robin Rogers, PhD., and colleagues from the University of Alabama, say they are making progress towards the 40-year-old dream of tapping the sea for uranium. The scientists have developed promising technology, and provided an analysis that shows uranium taken from the oceans could help solidify nuclear energy as a sustainable electricity source. Erich Schneider, PhD. showed through an economic analysis done for the U.S. Department of Energy (DOE) that the technology can extract about twice as much uranium from seawater as approaches that were developed back in the 1990s. The improvement in the technology could drive the cost of uranium to around $300 per pound, which currently stands at about $560 per pound. Although the price seems appealing, it is actually deceitful because the price of extracting the uranium from the ocean is about five times more expensive than mining it from the ground. Energy companies want to have an assurance that reasonably price uranium fuel is available on a century-long time frame, and knowing that the ocean can work as a backup source may help provide the companies the assurance they are looking for. “This uncertainty around whether there’s enough terrestrial uranium is impacting the decision-making in the industry, because it’s hard to make long-term research and development or deployment decisions in the face of big uncertainties about the resource,” Schneider said in a press release. “So if we can tap into uranium from seawater, we can remove that uncertainty.” Rogers said right now, “it doesn’t appear to me to be economically viable in today’s economy,” to start the process of taping uranium out of the ocean. However, he said tomorrow may be another story. He said that in Schneider’s report, the main costs are transportation in getting out into the ocean, including how many ships will be used, paying ship captains, and paying ship crews. Political questions were brought up among reporters during the press conference redOrbit was attending, and Rogers ensured that their motives are purely for science. He said any type of nuclear power is going to get a lot of pros and cons from countries and individuals. He asked, “why would you not at least have the technology and the science ready if you have to use them,” in the future. Rogers said that scientists’ policies are not to dictate the U.S. policies, but to understand what is feasible, and economical. He said one aspect of the scientists’ research would be to try and remove uranium contamination from the ground water. Overall, he said the goal was to have a cleaner source of critical materials, and a sustainable source of critical materials. “Estimates indicate that the oceans are a **mother lode of uranium**, with far more uranium dissolved in seawater than in all the known terrestrial deposits that can be mined,” Rogers, who organized the symposium and presented his own technology at the event, said in a press release. “The difficulty has always been that the concentration is just very, very low, making the cost of extraction high. But we are gaining on that challenge.

### 2NC Terror

#### No risk of terrorism – a Harvard professor says to prefer our study

Walt 12 (Stephen, Belfer Professor of International Affairs – Harvard University, “What Terrorist Threat?,” Foreign Policy, 8-13, http://walt.foreignpolicy.com/posts/2012/08/13/what\_terrorist\_threat)

Remember how the London Olympics were supposedly left vulnerable to terrorists after the security firm hired for the games admitted that it couldn't supply enough manpower? This "humiliating shambles" forced the British government to call in 3,500 security personnel of its own, and led GOP presidential candidate Mitt Romney to utter some tactless remarks about Britain's alleged mismanagement during his official "Foot-in-Mouth" foreign tour last month. Well, surprise, surprise. Not only was there no terrorist attack, the Games themselves came off rather well. There were the inevitable minor glitches, of course, but no disasters and some quite impressive organizational achievements. And of course, athletes from around the world delivered inspiring, impressive, heroic, and sometimes disappointing performances, which is what the Games are all about. Two lessons might be drawn from this event. The first is that the head-long rush to privatize everything -- including the provision of security -- has some obvious downsides. When markets and private firms fail, it is the state that has to come to the rescue. It was true after the 2007-08 financial crisis, it's true in the ongoing euro-mess, and it was true in the Olympics. Bear that in mind when Romney and new VP nominee Paul Ryan tout the virtues of shrinking government, especially the need to privatize Social Security and Medicare. The second lesson is that we continue to over-react to the "terrorist threat." Here I recommend you read John Mueller and Mark G. Stewart's The Terrorism Delusion: America's Overwrought Response to September 11, in the latest issue of International Security. Mueller and Stewart analyze 50 cases of supposed "Islamic terrorist plots" against the United States, and show how virtually all of the perpetrators were (in their words) "incompetent, ineffective, unintelligent, idiotic, ignorant, unorganized, misguided, muddled, amateurish, dopey, unrealistic, moronic, irrational and foolish." They quote former Glenn Carle, former deputy national intelligence officer for transnational threats saying "we must see jihadists for the small, lethal, disjointed and miserable opponents that they are," noting further that al Qaeda's "capabilities are far inferior to its desires." Further, Mueller and Stewart estimate that expenditures on domestic homeland security (i.e., not counting the wars in Iraq or Afghanistan) have increased by more than $1 trillion since 9/11, even though the annual risk of dying in a domestic terrorist attack is about 1 in 3.5 million. Using conservative assumptions and conventional risk-assessment methodology, they estimate that for these expenditures to be cost-effective "they would have had to deter, prevent, foil or protect against 333 very large attacks that would otherwise have been successful every year." Finally, they worry that this exaggerated sense of danger has now been "internalized": even when politicians and "terrorism experts" aren't hyping the danger, the public still sees the threat as large and imminent. As they conclude: ... Americans seems to have internalized their anxiety about terrorism, and politicians and policymakers have come to believe that they can defy it only at their own peril.  Concern about appearing to be soft on terrorism has replaced concern about seeming to be soft on communism, a phenomenon that lasted far longer than the dramatic that generated it ... This extraordinarily exaggerated and essentially delusional response may prove to be perpetual." Which is another way of saying that you should be prepared to keep standing in those pleasant and efficient TSA lines for the rest of your life, and to keep paying for far-flung foreign interventions designed to "root out" those nasty jihadis.

#### No nuclear terror – operation, cohesion and coordination

Mueller and Stewart 12 [John Mueller is Senior Research Scientist at the Mershon Center for International Security Studies and Adjunct Professor in the Department of Political Science, both at Ohio State University, and Senior Fellow at the Cato Institute in Washington, D.C. Mark G. Stewart is Australian Research Council Professorial Fellow and Professor and Director at the Centre for Infrastructure Performance and Reliability at the University of Newcastle in Australia, “The Terrorism Delusion”, International Security, Vol. 37, No. 1 (Summer 2012), pp. 81–110, Chetan]

In the eleven years since the September 11 attacks, no terrorist has been able to detonate even a primitive bomb in the United States, and except for the four explosions in the London transportation system in 2005, neither has any in the United Kingdom. Indeed, the only method by which Islamist terrorists have managed to kill anyone in the United States since September 11 has been with gunfire—inflicting a total of perhaps sixteen deaths over the period (cases 4, 26, 32).11 This limited capacity is impressive because, at one time, small-scale terrorists in the United States were quite successful in setting off bombs. Noting that the scale of the September 11 attacks has “tended to obliterate America’s memory of pre-9/11 terrorism,” Brian Jenkins reminds us (and we clearly do need reminding) that the 1970s witnessed sixty to seventy terrorist incidents, mostly bombings, on U.S. soil every year.12 The situation seems scarcely different in Europe and other Western locales. Michael Kenney, who has interviewed dozens of government officials and intelligence agents and analyzed court documents, has found that, in sharp contrast with the boilerplate characterizations favored by the DHS and with the imperatives listed by Dalmia, Islamist militants in those locations are operationally unsophisticated, short on know-how, prone to making mistakes, poor at planning, and limited in their capacity to learn.13 Another study documents the difficulties of network coordination that continually threaten the terrorists’ operational unity, trust, cohesion, and ability to act collectively.14 In addition, although some of the plotters in the cases targeting the United States harbored visions of toppling large buildings, destroying airports, setting off dirty bombs, or bringing down the Brooklyn Bridge (cases 2, 8, 12, 19, 23, 30, 42), all were nothing more than wild fantasies, far beyond the plotters’ capacities however much they may have been encouraged in some instances by FBI operatives. Indeed, in many of the cases, target selection is effectively a random process, lacking guile and careful planning. Often, it seems, targets have been chosen almost capriciously and simply for their convenience. For example, a would-be bomber targeted a mall in Rockford, Illinois, because it was nearby (case 21). Terrorist plotters in Los Angeles in 2005 drew up a list of targets that were all within a 20-mile radius of their shared apartment, some of which did not even exist (case 15). In Norway, a neo-Nazi terrorist on his way to bomb a synagogue took a tram going the wrong way and dynamited a mosque instead.15 Although the efforts of would-be terrorists have often seemed pathetic, even comical or absurd, the comedy remains a dark one. Left to their own devices, at least a few of these often inept and almost always self-deluded individuals could eventually have committed some serious, if small-scale, damage.16

#### Even if there is an attack – it would be small scale and disorganized

Mueller and Stewart 12 [John Mueller is Senior Research Scientist at the Mershon Center for International Security Studies and Adjunct Professor in the Department of Political Science, both at Ohio State University, and Senior Fellow at the Cato Institute in Washington, D.C. Mark G. Stewart is Australian Research Council Professorial Fellow and Professor and Director at the Centre for Infrastructure Performance and Reliability at the University of Newcastle in Australia, “The Terrorism Delusion”, International Security, Vol. 37, No. 1 (Summer 2012), pp. 81–110, Chetan]

Calculating the Costs of the Counterterrorism Delusion Delusion is a quality that is difficult to quantify. Nevertheless, there may be a way to get a sense of its dimensions—or at least of its cost consequences. We have argued that terrorism is a limited problem with limited consequences and that the reaction to it has been excessive, and even delusional. Some degree of effort to deal with the terrorism hazard is, however, certainly appropriate—and is decidedly not delusional. The issue then is a quantitative one: At what point does a reaction to a threat that is real become excessive or even delusional? At present rates, as noted earlier, an American’s chance of being killed by terrorism is one in 3.5 million in a given year. This calculation is based on history (but one that includes the September 11 attacks in the count), and things could, of course, become worse in the future. The analysis here, however, suggests that terrorists are not really all that capable, that terrorism tends to be a counterproductive exercise, and that September 11 is increasingly standing out as an aberration, not a harbinger. Moreover, it has essentially become officially accepted that the likelihood of a large-scale organized attack such as September 11 has declined and that the terrorist attacks to fear most are ones that are small scale and disorganized.66 Attacks such as these can inflict painful losses, of course, but they are quite limited in their effect and, even if they do occur, they would not change the fatality risk for the American population very much.

#### Al Qaeda is crumbling internally by alienating foreign supporters

Mueller and Stewart 12 [John Mueller is Senior Research Scientist at the Mershon Center for International Security Studies and Adjunct Professor in the Department of Political Science, both at Ohio State University, and Senior Fellow at the Cato Institute in Washington, D.C. Mark G. Stewart is Australian Research Council Professorial Fellow and Professor and Director at the Centre for Infrastructure Performance and Reliability at the University of Newcastle in Australia, “The Terrorism Delusion”, International Security, Vol. 37, No. 1 (Summer 2012), pp. 81–110, Chetan]

In fact, it is unclear whether al-Qaida central, now holed up in Pakistan and under sustained attack, has done much of anything since September 11 except issue videos filled with empty, self-infatuated, and essentially delusional threats. For example, it was in October 2002 that Osama bin Laden proclaimed, “Understand the lesson of New York and Washington raids, which came in response to some of your previous crimes. . . . God is my witness, the youth of Islam are preparing things that will fill your hearts with fear. They will target key sectors of your economy until you stop your injustice and aggression or until the more short-lived of us die.” And in January 2006, he insisted that the “delay” in carrying out operations in the United States “was not due to failure to breach your security measures,” and that “operations are under preparation, and you will see them on your own ground once they are finished, God willing.”18 Bin Laden’s tiny group of 100 or so followers does appear to have served as something of an inspiration to some Muslim extremists, may have done some training, has contributed a bit to the Taliban’s far larger insurgency in Afghanistan, and may have participated in a few terrorist acts in Pakistan.19 In his examination of the major terrorist plots against the West since September 11, Mitchell Silber finds only two (cases 1 and 20) that could be said to be under the “command and control” of al-Qaida central (as opposed to ones suggested, endorsed, or inspired by the organization), and there are questions about how full its control was even in these two instances.20 This highly limited record suggests that Carle was right in 2008 when he warned, “We must not take fright at the specter our leaders have exaggerated. In fact, we must see jihadists for the small, lethal, disjointed and miserable opponents that they are.” Al-Qaida “has only a handful of individuals capable of planning, organizing and leading a terrorist organization,” and although it has threatened attacks, “its capabilities are far inferior to its desires.”21 Impressively, bin Laden appears to have remained in a state of self-delusion even to his brutal and abrupt end. He continued to cling to the belief that another attack such as September 11 might force the United States out of the Middle East, and he was unfazed that the first such effort had proven to be spectacularly counterproductive in this respect by triggering a deadly invasion of his base in Afghanistan and an equally deadly pursuit of his operatives.22 Other terrorist groups around the world affiliated or aligned or otherwise connected to al-Qaida may be able to do intermittent damage to people and infrastructure, but nothing that is very sustained or focused. In all, extremist Islamist terrorism—whether associated with al-Qaida or not—has claimed 200 to 400 lives yearly worldwide outside war zones. That is 200 to 400 too many, of course, but it is about the same number as bathtub drownings every year in the United States.23 In addition to its delusional tendencies, al-Qaida has, as Patrick Porter notes, a “talent at self-destruction.”24 With the September 11 attacks and subsequent activity, bin Laden and his followers mainly succeeded in uniting the world, including its huge Muslim population, against their violent global jihad.25 These activities also turned many radical Islamists against them, including some of the most prominent and respected.26 No matter how much states around the world might disagree with the United States on other issues (most notably on its war in Iraq), there is a compelling incentive for them to cooperate to confront any international terrorist problem emanating from groups and individuals connected to, or sympathetic with, al-Qaida. Although these multilateral efforts, particularly by such Muslim states as Libya, Pakistan, Sudan, Syria, and even Iran, may not have received sufficient publicity, these countries have felt directly threatened by the militant network, and their diligent and aggressive efforts have led to important breakthroughs against the group.27 Thus a terrorist bombing in Bali in 2002 galvanized the Indonesian government into action and into making extensive arrests and obtaining convictions. When terrorists attacked Saudis in Saudi Arabia in 2003, the government became considerably more serious about dealing with internal terrorism, including a clampdown on radical clerics and preachers. The main result of al-Qaida-linked suicide terrorism in Jordan in 2005 was to outrage Jordanians and other Arabs against the perpetrators. In polls conducted in thirty-five predominantly Muslim countries by 2008, more than 90 percent condemned bin Laden’s terrorism on religious grounds.28 In addition, the mindless brutalities of al-Qaida-affiliated combatants in Iraq—staging beheadings at mosques, bombing playgrounds, taking over hospitals, executing ordinary citizens, performing forced marriages—eventually turned the Iraqis against them, including many of those who had previously been fighting the U.S. occupation either on their own or in connection with the group.29 In fact, they seem to have managed to alienate the entire population: data from polls in Iraq in 2007 indicate that 97 percent of those surveyed opposed efforts to recruit foreigners to fight in Iraq; 98 percent opposed the militants’ efforts to gain control of territory; and 100 percent considered attacks against Iraqi civilians “unacceptable.”30 In Iraq as in other places, “al-Qaeda is its own worst enemy,” notes Robert Grenier, a former top CIA counterterrorism official. “Where they have succeeded initially, they very quickly discredit themselves.”31 Grenier’s improbable company in this observation is Osama bin Laden, who was so concerned about al-Qaida’s alienation of most Muslims that he argued from his hideout that the organization should take on a new name.32 Al-Qaida has also had great difficulty recruiting Americans. The group’s most important, and perhaps only, effort at this is the Lackawanna experience, when a smooth-talking operative returned to the upstate New York town in early 2000 and tried to convert young Yemini-American men to join the cause (case 5). In the summer of 2001, seven agreed to accompany him to an al-Qaida training camp, and several more were apparently planning to go later. Appalled at what they found there, however, six of the seven returned home and helped to dissuade those in the next contingent.

### AT Retaliation (General)

#### Public anxiety prevents retaliation

Huddy et al. 05 – Professor of political science @ Stony Brook University, Stony Brook, NY [Leonie Huddy, Stanley Feldman (Professor of political science @ Stony Brook University, Stony Brook, NY), Charles Taber (Professor of political science @ Stony Brook University, Stony Brook, NY) & Gallya Lahav (Professor of political science @ Stony Brook University, Stony Brook, NY), “Threat, Anxiety, and Support of Antiterrorism Policies,” American Journal of Political Science, Vol. 49, No. 3, July 2005, Pp. 593–608]

The findings from this study lend further insight into the future trajectory of support for antiterrorism measures in the United States when we consider the potential effects of anxiety. Security threats in this and other studies increase support for military action (Jentleson 1992; Jentleson and Britton 1998;Herrmann,Tetlock, and Visser 1999). But anxious respondents were less supportive of belligerent military action against terrorists, suggesting an important source of opposition to military intervention. In the aftermath of 9/11, several factors were consistently related to heightened levels of anxiety and related psychological reactions, including living close to the attack sites (Galea et al. 2002; Piotrkowski and Brannen 2002; Silver et al. 2002), and knowing someone who was hurt or killed in the attacks (in this study). It is difficult to say what might happen if the United States were attacked again in the near future. Based on our results, it is plausible that a future threat or actual attack directed at a different geographic region would broaden the number of individuals directly affected by terrorism and concomitantly raise levels of anxiety. This could, in turn, **lower support for overseas military action**. In contrast, in the absence of any additional attacks levels of anxiety are likely to decline slowly over time (we observed a slow decline in this study), weakening opposition to future overseas military action. Since our conclusions are based on analysis of reactions to a single event in a country that has rarely felt the effects of foreign terrorism, we should consider whether they can be generalized to reactions to other terrorist incidents or to reactions under conditions of sustained terrorist action. Our answer is a tentative yes, although there is no conclusive evidence on this point as yet. Some of our findings corroborate evidence from Israel, a country that has prolonged experience with terrorism. For example, Israeli researchers find that perceived risk leads to increased vilification of a threatening group and support for belligerent action (Arian 1989; Bar-Tal and Labin 2001). There is also evidence that Israelis experienced fear during the Gulf War, especially in Tel Aviv where scud missiles were aimed (Arian and Gordon 1993). What is missing, however, is any evidence that anxiety tends to undercut support for belligerent antiterrorism measures under conditions of sustained threat. For the most part, Israeli research has not examined the distinct political effects of anxiety. In conclusion, the findings from this study provide significant new evidence on the political effects of terrorism and psychological reactions to external threat more generally. Many terrorism researchers have speculated that acts of terrorist violence can arouse fear and anxiety in a targeted population, which lead to alienation and social and political dislocation.8 We have clear evidence that the September 11 attacks did induce anxiety in a sizeable minority of Americans. And these emotions were strongly associated with symptoms of depression, appeared to inhibit learning about world events, and weakened support foroverseas military action. This contrasted, however, with Americans’ dominant reaction, which was a heightened concern about future terrorist attacks in the United States that galvanized support for government antiterrorist policy. In this sense, the 9/11 terrorists failed to arouse sufficient levels of anxiety to counteract Americans’ basic desire to strike back in order to increase future national security, even if such action increased the shortterm risk of terrorism at home. Possible future acts of terrorism, or a different enemy, however, could change the fine balance between a public attuned to future risks and one dominated by anxiety.

## Warming

### 2NC Water Wars

#### Water cooperation in the interim solves any risk of conflict

Bernauer and Siegfried 12 (Thomas Bernauer and Tobias Siegfried 12, professor of political science at ETH Zurich, his research group is based at the Center for Comparative and International Studies AND adjunct assistant professor at the School of International and Public Affairs at Columbia University and a fellow at the Earth Institute, "Climate change and international water conflict in Central Asia," January, Journal of Peace Research Vol. 49, Issue 1, Sage Journals)

Conclusions¶ In this article we have engaged in a critical assessment of the neo-malthusian claim that climatic changes can be an important source of international tensions, in the extreme even militarized interstate disputes. The most likely scenarios are international disputes over transboundary waters. Existing event datasets on international river basin conflict and cooperation indicate that international disputes over water issues are quite common. But none of these disputes has thus far escalated into a militarized interstate dispute in a form that would, according to common definitions, qualify as a war. Nonetheless, many observers expect that the outbreak of future militarized interstate disputes remains a strong possibility.¶ The strongest ‘candidates’ in this respect are international catchments shared by poorer, less democratic, and politically less stable countries, governed by weak international water management institutions and exposed to severe climatic changes. Since the Syr Darya corresponds quite well to these characteristics, it is a critical test case. If the neo-malthusian specter of militarized interstate disputes over water is empirically relevant, we should see signs of it in the Syr Darya. Hence we have studied, ex post, international water allocation problems and institutions in the Syr Darya and, ex ante, whether climatic changes are likely to make existing international tensions worse in future.¶ Based on hydrological data and other information, we have found that the currently existing international water management institution in the Syr Darya has failed. Using a coupled climate, land-ice, and rainfall-runoff model for the Syr Darya, we have then examined whether, in the absence of an effective water allocation mechanism in this international catchment, climate change is likely to make existing international tensions worse. The biggest concern in this respect is Kyrgyz– Uzbek relations, which could deteriorate further because the Uzbek population and agriculture in the Syr Darya catchment are particularly vulnerable to climate change-induced shifts in runoff. We conclude, however, that such shifts are likely to occur only in the medium to long term. This leaves some time for the riparian countries to set up an effective international framework for water allocation and prevention of climate changeinduced geohazards. By implication, our findings suggest that a climate change-induced militarized interstate dispute over water resources in Central Asia is unlikely.

#### -- No water wars

Victor 7 (David G., Professor of Law – Stanford Law School and Director – Program on Energy and Sustainable Development, “What Resource Wars?”, The National Interest, 11-12, http://www.nationalinterest.org/Article.aspx?id=16020)

While there are many reasons to fear global warming, the risk that such dangers could cause violent conflict ranks extremely low on the list because it is highly unlikely to materialize. Despite decades of warnings about water wars, what is striking is that **water wars don't happen**-usually because countries that share water resources have a lot more at stake and armed conflict rarely fixes the problem. Some analysts have pointed to conflicts over resources, including water and valuable land, as a cause in the Rwandan genocide, for example. Recently, the UN secretary-general suggested that climate change was already exacerbating the conflicts in Sudan. But none of these supposed causal chains stay linked under close scrutiny-the conflicts over resources are usually symptomatic of deeper failures in governance and other primal forces for conflicts, such as ethnic tensions, income inequalities and other unsettled grievances. Climate is just one of many factors that contribute to tension. The same is true for scenarios of climate refugees, where the moniker "climate" conveniently obscures the deeper causal forces.

#### -- Water scarcity spurs cooperation – not conflict

Deen 7 (Thalif, Staff – IPS, “Water Wars A Myth”, Inter Press Service, 8-25, Lexis)

"Despite the potential problem, history has demonstrated that cooperation, rather than conflict, is likely in shared basins," UNESCO concludes. The Stockholm International Water Institute (SIWI) says that 10- to 20-year-old arguments about conflict over water are still being recycled. "Such arguments **ignore massive amounts of recent research** which shows that water-scarce states that share a water body tend to find cooperative solutions rather than enter into violent conflict," the institute says. SIWI says that during the entire "intifada" -- the ongoing Palestinian uprising against Israel in the occupied territories of West Bank and Gaza -- the only thing on which the two warring parties continued to cooperate at a basic level was their shared waters. "Thus, rather than reaching for arguments for the 'water war hypotheses,' the facts seem to support the idea that water is a uniting force and a potential source of peace rather than violent conflict." SIWI said. Ghosh, co-author of the UNDP study, pointed out several agreements which were "models of cooperation", including the Indus Waters Treaty, the Israel-Jordan accord, the Senegal River Development Organisation and the Mekong River Commission. A study sponsored by the Washington-based Woodrow Wilson International Centre for Scholars points that despite newspaper headlines screaming "water wars are coming!", these apocalyptic warnings fly in the face of history. "**No nations have gone to war** specifically **over** **water** resources **for thousands of years**. International water disputes -- even among fierce enemies -- are resolved peacefully, even as conflicts erupt over other issues," it says. The study also points out instances of cooperation between riparian nations -- countries or provinces bordering the same river -- that outnumbered conflicts by more than **two to one** between 1945 and 1999. Why? "Because water is so important, nations cannot afford to fight over it. Instead, **water fuels greater interdependence**. By coming together to jointly manage their shared water resources, countries can build trust and prevent conflict," argues the study, jointly co-authored by Aaron Wolf, Annika Kramer, Alexander Carius and Geoffrey Dabelko.

### AT Desal 2NC

#### Nuclear power increases water scarcity

**Sovacool and Cooper, 7** – Senior Research Fellow for the Virginia Center for Coal and Energy Research, and founder of the Network for New Energy Choices (Ben and Chris, June. “Renewing America: The Case for Federal Leadership on a National Renewable Portfolio Standard (RPS)”, http://www.newenergychoices.org/dev/uploads/Renewing%20America\_NNEC\_Final.pdf)

If projected electricity demand is met using water-intensive fossil fuel and nuclear reactors, America will soon be withdrawing more water for electricity production than for farming. Perhaps the most important—and least discussed—advantage to a federal RPS is its ability to displace electricity generation that is extremely water-intensive. The nation’s oil, coal, natural gas, and nuclear facilities consume about 3.3 billion gallons of water each day.244 In 2006, they accounted for almost 40 percent of all freshwater withdrawals (water diverted or withdrawn from a surface- or ground-water source), roughly equivalent to all the water withdrawals for irrigated agriculture in the entire United States.245 A conventional 500 MW coal plant, for instance, consumes around 7,000 gallons of water per minute, or the equivalent of 17 Olympic-sized swimming pools every day.246 Older, less efficient plants can be much worse. In Georgia, the 3,400 MW Sherer coal facility consumes as much as 9,913 gallons of water for every MWh of electricity it generates. Data from the Electric Power Research Institute (EPRI) also confirms that every type of traditional power plant consumes and withdraws vast amounts of water. Conventional power plants use thousands of gallons of water for the condensing portion of their thermodynamic cycle. Coal plants also use water to clean and process fuel, and all traditional plants lose water through evaporative loss. Newer technologies, while they withdraw less water, actually consume more. Advanced power plant systems that rely on re-circulating, closed-loop cooling technology convert more water to steam that is vented to the atmosphere. Closed-loop systems also rely on greater amounts of water for cleaning and therefore return less water to the original source. Thus, while modern power plants may reduce water withdrawals by up to 10 percent, they contribute even more to the nation’s water scarcity. Nuclear reactors, in particular, require massive supplies of water to cool reactor cores and spent nuclear fuel rods. Because much of the water is turned to steam, substantial amounts are lost to the local water table entirely. One nuclear plant in Georgia, for example, withdraws an average of 57 million gallons every day from the Altamaha River, but actually “consumes” (primarily as lost water vapor) 33 million gallons per day from the local supply, enough to service more than 196,000 Georgia homes. With electricity demand expected to grow by approximately 50 percent in the next 25 years, continuing to rely on fossil fuel-fired and nuclear generators could spark a water scarcity crisis. In 2006, the Department of Energy warned that consumption of water for electricity production could more than double by 2030, to 7.3 billion gallons per day, if new power plants continue to be built with evaporative cooling. This staggering amount is equal to the entire country’s water consumption in 1995

#### New methods solve desalination

ScienceDaily, 10 (3/23, “New Approach to Water Desalination Could Lead to Small, Portable Units for Disaster Sites or Remote Locations.” http://www.sciencedaily.com/releases/2010/03/100323161505.htm)

A new approach to desalination being developed by researchers at MIT and in Korea could lead to small, portable desalination units that could be powered by solar cells or batteries and could deliver enough fresh water to supply the needs of a family or small village. As an added bonus, the system would also remove many contaminants, viruses and bacteria at the same time. The new approach, called ion concentration polarization, is described in a paper by Postdoctoral Associate Sung Jae Kim and Associate Professor Jongyoon Han, both in MIT's Department of Electrical Engineering and Computer Science, and colleagues in Korea. The system works at a microscopic scale, using fabrication methods developed for microfluidics devices -- similar to the manufacture of microchips, but using materials such as silicone (synthetic rubber). Each individual device would only process minute amounts of water, but a large number of them -- the researchers envision an array with 1,600 units fabricated on an 8-inch-diameter wafer -- could produce about 15 liters of water per hour, enough to provide drinking water for several people. The whole unit could be self-contained and driven by gravity -- salt water would be poured in at the top, and fresh water and concentrated brine collected from two outlets at the bottom. That small size could actually be an advantage for some applications, Kim explains. For example, in an emergency situation like Haiti's earthquake aftermath, the delivery infrastructure to get fresh water to the people who need it was largely lacking, so small, portable units that individuals could carry would have been especially useful. So far, the researchers have successfully tested a single unit, using seawater they collected from a Massachusetts beach. The water was then deliberately contaminated with small plastic particles, protein and human blood. The unit removed more than 99 percent of the salt and other contaminants. "We clearly demonstrated that we can do it at the unit chip level," says Kim. While the amount of electricity required by this method is actually slightly more than for present large-scale methods such as reverse osmosis, there is no other method that can produce small-scale desalination with anywhere near this level of efficiency, the researchers say. If properly engineered, the proposed system would only use about as much power as a conventional lightbulb. The basic principle that makes the system possible, called ion concentration polarization, is a ubiquitous phenomenon that occurs near ion-selective materials (such as Nafion, often used in fuel cells) or electrodes, and this team and other researchers have been applying the phenomenon for other applications such as biomolecule preconcentration. . This application to water purification has not been attempted before, however. Potable water is often in high demand and short supply following a natural disaster like the Haiti earthquake or Hurricane Katrina. In both of those instances, the disaster zones were near the sea, but converting salty seawater to potable fresh water usually requires a large amount of dependable electrical power and large-scale desalination plants -- neither of which were available in the disaster areas. One of the leading desalination methods, called reverse osmosis, uses membranes that filter out the salt, but these require strong pumps to maintain the high pressure needed to push the water through the membrane, and are subject to fouling and blockage of the pores in the membrane by salt and contaminants. The new system separates salts and microbes from the water by electrostatically repelling them away from the ion-selective membrane in the system -- so the flowing water never needs to pass through a membrane. That should eliminate the need for high pressure and the problems of fouling, the researchers say. Having proved the principle in a single-unit device, Kim and Han plan to produce a 100-unit device to demonstrate the scaling-up of the process, followed by a 10,000-unit system. They expect it will take about two years before the system will be ready to develop as a product. "After that," says Kim, "we'll know if it's possible" for this to work as a robust, portable system, "and what problems might need to be worked on." The work was primarily funded by a grant from the National Science Foundation, as well as a SMART Innovation Centre grant.

### 2NC Resource Wars – No Risk

#### -- Empirical data concludes Neg – scarcity doesn’t cause conflict

Salehyan 7 (Idean, Assistant Professor of Political Science – University of North Texas, “The New Myth About Climate Change”, Foreign Policy, August, <http://www.foreignpolicy.com/story/cms.php?story_id=3922>)

First, aside from a few anecdotes, there is **little systematic empirical evidence** that resource scarcity and changing environmental conditions lead to conflict. In fact, **several studies** have shown that an abundance of natural resources is **more** **likely** to contribute to conflict. Moreover, even as the planet has warmed, the number of civil wars and insurgencies has decreased dramatically. Data collected by researchers at Uppsala University and the International Peace Research Institute, Oslo shows a **steep decline** in the number of armed conflicts around the world. Between 1989 and 2002, some 100 armed conflicts came to an end, including the wars in Mozambique, Nicaragua, and Cambodia. If global warming causes conflict, we should not be witnessing this downward trend. Furthermore, if famine and drought led to the crisis in Darfur, why have scores of environmental catastrophes failed to set off armed conflict elsewhere? For instance, the U.N. World Food Programme warns that 5 million people in Malawi have been experiencing chronic food shortages for several years. But famine-wracked Malawi has yet to experience a major civil war. Similarly, the Asian tsunami in 2004 killed hundreds of thousands of people, generated millions of environmental refugees, and led to severe shortages of shelter, food, clean water, and electricity. Yet the tsunami, one of the most extreme catastrophes in recent history, did not lead to an outbreak of resource wars. **Clearly** then, **there is much more to** armed **conflict than resource scarcity** and natural disasters.

#### Your scenarios are invented to justify military spending.

Thomas P. M. Barnett, 3/23/2009. Visiting scholar at the University of Tennessee's Howard Baker Center, former Senior Strategic Researcher and Professor in the Warfare Analysis & Research Department, Center for Naval Warfare Studies, U.S. Naval War College, AM in Regional Studies: Russia, Eastern Europe and Central Asia and a PhD in Political Science from Harvard. “Threat of Great Power War Recedes,” Korea Times, <http://www.koreatimes.co.kr/www/news/opinon/2009/03/137_41779.html>.

While difficult to keep in mind amidst today's economic nationalism, a global middle class of unprecedented size rises in the emerging markets of the East and South. **This accomplishment logically ensures the continuation of great-power peace**, as America's grand strategy of spreading its liberal trade order reaches its global apogee. Countering this view is a growing cohort of academics and analysts who insist that such rising consumer demand will inevitably trigger ``resource wars" among the world's great powers, with climate change as an unforgiving accelerant. A little secret here: a good portion of America's defense establishment desperately needs the long-term specter of resource wars to continue justifying the big-war-centric structure of our armed forces. It needs to sell this vision of future conflict because, without it, the small-wars community will triumph in a looming budgetary battle that will define the Obama administration's legacy in national security affairs. Here's where it gets tricky for President Obama: the three conflict scenarios that currently justify our military's big-war focus are China-Taiwan; North Korea, and Iran. **All three scenarios will effectively disappear over the next half-decade**.

#### -- Resource ‘conflicts’ don’t escalate – negotiations and compromise are the norm

Goldstone 2 (Jack, Professor of Public Policy – George Mason, “Population and Security: How Demographic Change Can Lead to Violent Conflict”, Journal of International Affairs, 56, Fall, p. 123)

Should we therefore dismiss the environment as a cause of conflict? No, although I believe we can be free of the fear that environmental decay will unleash wars and revolutions across the globe. Rather, what research has shown is that although environmental issues do cause international and domestic conflicts, they are of the kind that are **generally settled by negotiation and compromise** and do not lead to taking up arms. The reason for that is straightforward. Where the problem faced by two groups, or two nations, is over the degradation or depletion of an environmental resource, war neither solves the problem (it cannot make more of the resource) nor is it an economically efficient way to redistribute the resource (the costs of war almost invariably far outweigh the cost of gaining alternative resources or paying more for a share of the resource). For example, if two nations have a conflict over sharing river water—such as India and Bangladesh over the Ganges, Israel and Jordan over the river Jordan[ [12](http://web.ebscohost.com.ezp1.harvard.edu/ehost/detail?vid=3&hid=106&sid=b52b09a2-e198-49a9-9721-f665c7920b18%40sessionmgr109#bib12#bib12)] or Hungary and Slovakia over the Danube they may threaten violence but in fact are most likely to produce non-violent resolution through negotiation or arbitration rather than war (and indeed all of these conflicts led to treaties or international arbitration. The reason is that for one party to insist on all the water would in fact be a casus belli; and to risk a war to simply increase one's access to water is economically foolhardy. Throughout the world, the main use of freshwater (over three-quarters) is for irrigation to produce food. A reduction in water can be compensated either by adopting more efficient means of irrigation (drip rather than ditch); by switching to less water-intensive crops (dry grains rather than rice; tree crops rather than grains); or by importing food rather than producing it. All of these steps, though costly, are far, far, less costly than armed conflict. Thus for both the country with the ability to take more water and the country dependent on downstream flows, the issue will be how to use and negotiate use of the resource most efficiently; resort to war would inevitably be more costly than any gains that could be made from increased access to the resource. No nations have ever gone to war strictly over access to water; nor are any likely to do so in the future.

#### -- History proves – no resource wars

Victor 7 (David G., Professor of Law – Stanford Law School and Director – Program on Energy and Sustainable Development, “What Resource Wars?”, The National Interest, 11-12, http://www.nationalinterest.org/Article.aspx?id=16020)

If resource wars are actually rare-and when they do exist, they are part of a complex of causal factors-then much of the conventional wisdom about resource policies needs fresh scrutiny. A full-blown new strategy is beyond this modest essay, but here in the United States, at least three lines of new thinking are needed. First, the United States needs to think differently about the demands that countries with exploding growth are making on the world's resources. It must keep their rise in perspective, as their need for resources is still, on a per capita basis, much smaller than typical Western appetites. And what matters most is that the United States must focus on how to accommodate these countries' peaceful rise and their inevitable need for resources. Applied to China this means getting the Chinese government to view efficient markets as the best way to obtain resources-not only because such an approach leads to correct pricing (which encourages energy efficiency as resources become more dear), but also because it transforms all essential resources into commodities, which makes their particular physical location less important than the overall functioning of the commodity market. All that will, in turn, make resource wars even less likely because it will create common interests among all the countries with the greatest demand for resources. It will transform the resource problem from a zero-sum struggle to the common task of managing markets. Most policymakers agree with such general statements, but the actual practice of U.S. policy has largely undercut this goal. Saber-rattling about CNOOC's attempt to buy Unocal-along with similar fear-mongering around foreign control of ports and new rules that seem designed to trigger reviews by the Committee on Foreign Investment in the United States when foreigners try to buy American-owned assets-sends the signal that going out will also be the American approach, rather than letting markets function freely. Likewise, one of the most important actions in the oil market is to engage China and other emerging countries fully in the International Energy Agency-which is the world's only institution for managing the oil commodity markets in times of crisis-yet despite wide bipartisan consensus on that goal, nearly nothing is ever done to execute such a policy. Getting China to source commodities through markets rather than mercantilism will be relatively easy because Chinese policymakers, as well as the leadership of state enterprises that invest in natural resource projects, already increasingly think that way. **The sweep of history points against** classic **resource wars**. Whereas colonialism created long, oppressive and often war-prone supply chains for resources such as oil and rubber, most resources today are fungible commodities. That means it is almost always cheaper and more reliable to buy them in markets.

#### -- Global inequality makes resource wars inevitable

Sharp 7 (Travis, Military Policy Analyst – Center for Arms Control and Non-Proliferation, “Resource Conflict in the Twenty-First Century”, Peace Review, 19(3), http://www.armscontrolcenter.org/policy/securityspending/articles/ resource\_conflict\_twenty\_first\_century/)

The combination of rising resource consumption and unpredictable population growth is liable to exacerbate conflicts throughout the globe as resource-dependent nations become desperate to retain access to foreign-based commodities. Two persistent factors have driven resource scarcity. First, resources have geographical, ecological, and climatic limitations that mankind cannot control, as Waltraud Queiser Morales states in "Sustainable Development and Human Security." There are about 1047.7 billion barrels of proven oil reserves left in the world; once this supply is expended, according to Michael Klare in Blood and Oil, humans have no way of creating more oil and will have to either switch to alternative fuel sources or invent synthetic replacements. Second, resource scarcity stems from, in the words of Waltraud Morales, "...the **social and political conditions** of inequality and injustice that humankind has created and perpetuated in its struggle for power and dominance globally and within states." George Kennan vividly illustrated the risks and rewards of resource inequality in a secret policy brief written for American leaders at the beginning of the Cold War: "We have about 50% of the world's wealth but only 6.3% of its population...Our real task in the coming period is to devise a pattern of relationships which will permit us to maintain this position of disparity without positive detriment to our national security." Franklin Delano Roosevelt anticipated Kennan's argument during the closing months of World War II and organized a now-infamous summit with King Ibn Saud of Saudi Arabia. This meeting cemented the special US-Saudi relationship by ensuring US access to Saudi oil and Saudi access to American arms. Although Saudi proven oil reserves are substantial - about 25% of the global total - they will assuredly not last forever and are contingent upon a whole host of unstable social and political factors, including the repressive nature of the Saudi regime. This has led some analysts to predict that the US military will soon be converted into a glorified "oil-protection service." Underlying this prediction, however, are some fundamental assumptions about resource conflict that need to be considered in more detail.

#### -- Resource abundance is equally likely to cause conflict

Sharp 7 (Travis, Military Policy Analyst – Center for Arms Control and Non-Proliferation, “Resource Conflict in the Twenty-First Century”, Peace Review, 19(3), http://www.armscontrolcenter.org/policy/securityspending/articles/ resource\_conflict\_twenty\_first\_century/)

Brito and Intriligator's results have been supported more recently by the World Bank's Collier-Hoeffler (CH) model of civil war onset. The CH model maintains that the opportunities to organize and finance a war are more significant variables than any social or political grievances per se. Under this rubric, the CH model predicts that the chance a nation with limited resources will have a civil war in any five-year span is 1 in 100, but the chance that a resource rich nation will is 1 in 5, according to the March 2006 Harper's Index. Although mathematically-derived quantitative theories provide a **rigorous and concrete demonstration** of the causal relationship between resources and conflict, the historical record should verify any theory of war. I want to now use a specific case study to illustrate the historical link between natural resources and violence.

### Doesn’t Solve 2NC

#### Nuclear doesn’t solve warming –

#### A) Not cost-competitive and can’t produce enough hydrogen

Ahearne et al, 12 – adjunct scholar for Resources for the Future and an adjunct professor of engineering at Duke University (John F, February. Federation of American Scientists. “The Future of Nuclear Power in the United States.” http://www.fas.org/pubs/\_docs/Nuclear\_Energy\_Report-lowres.pdf)

In response to mitigating climate change, many countries will ﬁnd that nuclear power is neither the least-cost nor the quickest approach to reducing carbon dioxide emissions.1 Until nuclear energy is able to produce hydrogen or process heat, or until transportation sectors are electriﬁed, nuclear energy’s potential contribution to reducing carbon dioxide emissions will be somewhat limited.

#### B) Takes too long and can’t reduce emissions

**Madsen and Dutzik, 9** – Policy Analyst at Frontier Group and senior policy analyst with Frontier Group (Travis and Tony, November. With Bernadette Del Chiaro and Rob Sargent of the Environment America Research & Policy Center. “Generating Failure: How Building Nuclear Power Plants Would Set America Back in the Race Against Global Warming.” http://www.environmentamerica.org/sites/environment/files/reports/Generating-Failure---Environment-America---Web\_0.pdf)

Building 100 new nuclear reactors would happen too slowly to reduce global warming pollution in the near-term, and would actually increase the scale of emission cuts required in the future. At best, the nuclear industry could have a new reactor up and running by 2016, assuming that construction could be completed in four years. This pace would be faster than 80 to 95 percent of all reactors completed during the last wave of reactor construction in the United States. 70 If construction follows historical patterns, it could take nine years after a license is issued before the first reactor is up and running – into the 2020s. Under this very plausible scenario, new nuclear power could make no contribution toward reducing U.S. emissions of global warming pollution by 2020 – despite the investment of hundreds of billions of dollars for the construction of nuclear power plants. And even if the industry completed 100 new reactors by 2030, which is highly unlikely, these reactors would reduce cumulative power plant emissions of carbon dioxide over the next two decades by only 12 percent below business as usual, when a reduction of more than 70 percent is called for. In other words, 100 new nuclear reactors would be too little, too late to successfully meet our goals for limiting the severity of global warming.

#### IFRs too costly and too long term to solve warming – also trades off with short-term renewable tech that solves better

Cochran 9 (Thomas, Senior Scientist, Nuclear Program, Natural Resources Defense Council, “Senate Energy and Natural Resources Committee Hearing; To receive testimony on nuclear energy development; Testimony by Thomas Cochran, Senior Scientist, Nuclear Program, Natural Resources Defense Council” March 18, 2009, Congressional Documents and Publications)

B. Spent Fuel Reprocessing. The federal government should not encourage or support commercial spent fuel reprocessing. Putting aside for the moment the serious proliferation and security concerns involved in any future global shift toward reprocessing, it's clear that combating climate change is an urgent task that requires near term investments yielding huge decarbonization dividends on a 5 to 20 year timescale. For thermal reactors, the closed fuel cycle (spent fuel reprocessing and recycling plutonium) is unlikely ever to be less costly than the once-through fuel cycle, even assuming significant carbon controls. But setting aside such near-term cost barriers, commercial viability for a closed fuel cycle employing fast reactors is an even longer-term proposition. So even fervent advocates of nuclear power need to put the reprocessing agenda aside for a few decades, and focus on swiftly deploying and improving the low-carbon energy solutions. Think about it. In pursuit of closing the fuel cycle, the U.S. government could easily spend on the order of $ 150 billion over 15 years just to get to the starting line of large-scale commercialization. But all that spending will not yield one additional megawatt of low-carbon electricity beyond what could be obtained by sticking with the current once-through cycle, much less by investing that $150 billion in renewable and efficient energy technologies. Spent-fuel reprocessing, plutonium recycle, and fast reactor waste transmutation are currently uneconomical, higher-risk, 100-year answers to an urgent climate question that now requires low-risk 5 to 20 year solutions. For now, Congress and the new Administration should terminate funding for the Global Nuclear Energy Partnership (GNEP) and its associated efforts to close the nuclear fuel cycle and introduce fast burner reactors in the United States. At any point along the way, Mr. Chairman, we can revisit this issue to assess whether there may be truly disruptive innovations in nuclear technology that would alter this negative assessment, and induce us to view closing the fuel cycle as a more costeffective pathway to decarbonization than the host of cheaper alternatives we have available to us today.

### Transportation Outweighs 1NC

#### Transportation outweighs

**Gordon, 10** – nonresident senior associate in Carnegie’s Energy and Climate Program, where her research focuses on climate, energy, and transportation issues in the United States and China (Deborah, December. “The Role of Transportation in Driving Climate Disruption.” http://carnegieendowment.org/files/transport\_climate\_disruption.pdf)

Climate impacts differ by sector. On-road transportation has the greatest negative effect on climate, especially in the short term. This is primarily because of two factors unique to on-road transportation: (1) nearly exclusive use of petroleum fuels, the combustion of which results in high levels of the principal warming gases (carbon dioxide, ozone, and black carbon); and (2) minimal emissions of sulfates, aerosols, and organic carbon from on-road transportation sources to counterbalance warming with cooling effects. Scientists find that cutting on-road transportation climate and air-pollutant emissions would be unambiguously good for the climate (and public health) in the near term. Transportation’s role in climate change is especially problematic, given the dependence on oil that characterizes this sector today. There are too few immediate mobility and fuel options in the United States beyond oil-fueled cars and trucks. U.S. and international policy makers have yet to tackle transportationclimate challenges. In its fourth assessment report, the Intergovernmental Panel on Climate Change (IPCC) found that the global transportation sector was responsible for the most rapid growth in direct greenhouse gas emissions, a 120 percent increase between 1970 and 2004. To further complicate matters, the IPCC projects that, without policy intervention, the rapidly growing global transportation sector has little motivation to change the way it operates, because consumer choices are trumping best practices. Herein lies a fundamental mismatch between the climate problem and solutions: transportation is responsible for nearly one of every three tons of greenhouse gas emissions but represents less than one of every twelve tons of projected emission reductions. Clearly this sector is a major contributor to climate change; therefore, it should be the focus of new policies to mitigate warming. Government must lead this effort as the market alone cannot precipitate the transition away from cars and oil, which dominate this sector.

### 2NC Irreversible

#### 6 degree warming’s inevitable

AP 9 (Associated Press, Six Degree Temperature Rise by 2100 is Inevitable: UNEP, September 24, <http://www.speedy-fit.co.uk/index2.php?option=com_content&do_pdf=1&id=168>)

Earth's temperature is likely to jump six degrees between now and the end of the century even if every country cuts greenhouse gas emissions as proposed, according to a United Nations update. Scientists looked at emission plans from 192 nations and calculated what would happen to global warming. The projections take into account 80 percent emission cuts from the U.S. and Europe by 2050, which are not sure things. The U.S. figure is based on a bill that passed the House of Representatives but is running into resistance in the Senate, where debate has been delayed by health care reform efforts. Carbon dioxide, mostly from the burning of fossil fuels such as coal and oil, is the main cause of global warming, trapping the sun's energy in the atmosphere. The world's average temperature has already risen 1.4 degrees since the 19th century. Much of projected rise in temperature is because of developing nations, which aren't talking much about cutting their emissions, scientists said at a United Nations press conference Thursday. China alone adds nearly 2 degrees to the projections. "We are headed toward very serious changes in our planet," said Achim Steiner, head of the U.N.'s environment program, which issued the update on Thursday. The review looked at some 400 peer-reviewed papers on climate over the last three years. Even if the developed world cuts its emissions by 80 percent and the developing world cuts theirs in half by 2050, as some experts propose, the world is still facing a 3-degree increase by the end of the century, said Robert Corell, a prominent U.S. climate scientist who helped oversee the update. Corell said the most likely agreement out of the international climate negotiations in Copenhagen in December still translates into a nearly 5-degree increase in world temperature by the end of the century. European leaders and the Obama White House have set a goal to limit warming to just a couple degrees. The U.N.'s environment program unveiled the update on peer-reviewed climate change science to tell diplomats how hot the planet is getting. The last big report from the Nobel Prize-winning Intergovernmental Panel on Climate Change came out more than two years ago and is based on science that is at least three to four years old, Steiner said. Global warming is speeding up, especially in the Arctic, and that means that some top-level science projections from 2007 are already out of date and overly optimistic. Corell, who headed an assessment of warming in the Arctic, said global warming "is accelerating in ways that we are not anticipating." Because Greenland and West Antarctic ice sheets are melting far faster than thought, it looks like the seas will rise twice as fast as projected just three years ago, Corell said. He said seas should rise about a foot every 20 to 25 years.

#### Low threshold—less than 2 degrees is sufficient to cause their impacts

Harvey 11 (Fiona, Environment Reporter – Guardian, 11/9, “World headed for irreversible climate change in five years, IEA warns,” <http://www.guardian.co.uk/environment/2011/nov/09/fossil-fuel-infrastructure-climate-change>)

Climate scientists estimate that global warming of 2C above pre-industrial levels marks the limit of safety, beyond which climate change becomes catastrophic and irreversible. Though such estimates are necessarily imprecise, warming of as little as 1.5C could cause dangerous rises in sea levels and a higher risk of extreme weather – the limit of 2C is now inscribed in international accords, including the partial agreement signed at Copenhagen in 2009, by which the biggest developed and developing countries for the first time agreed to curb their greenhouse gas output.

#### Too little, too late

Harris 9 (Richard, Science Reporter for National Public Radio, Peabody Award Winner, American Association for the Advancement of Science Journalism Award, “Global Warming Irreversible, Study Says,” January 26th, NPR, http://www.npr.org/templates/story/story.php?storyId=99888903)

Climate change is essentially irreversible, according to a sobering new scientific study. As carbon dioxide emissions continue to rise, the world will experience more and more long-term environmental disruption. The damage will persist even when, and if, emissions are brought under control, says study author Susan Solomon, who is among the world's top climate scientists. "We're used to thinking about pollution problems as things that we can fix," Solomon says. "Smog, we just cut back and everything will be better later. Or haze, you know, it'll go away pretty quickly." That's the case for some of the gases that contribute to climate change, such as methane and nitrous oxide. But as Solomon and colleagues suggest in a new study published in the Proceedings of the National Academy of Sciences, it is not true for the most abundant greenhouse gas: carbon dioxide. Turning off the carbon dioxide emissions won't stop global warming. "People have imagined that if we stopped emitting carbon dioxide that the climate would go back to normal in 100 years or 200 years. What we're showing here is that's not right. It's essentially an irreversible change that will last for more than a thousand years," Solomon says. This is because the oceans are currently soaking up a lot of the planet's excess heat — and a lot of the carbon dioxide put into the air. The carbon dioxide and heat will eventually start coming out of the ocean. And that will take place for many hundreds of years.

#### It’s irreversible - it’s too late to stop the greenhouse effect

Harris 9 (Richard, Science Reporter for National Public Radio, Peabody Award Winner, American Association for the Advancement of Science Journalism Award, “Global Warming Irreversible, Study Says,” January 26th, NPR, http://www.npr.org/templates/story/story.php?storyId=99888903)

Climate change is essentially irreversible, according to a sobering new scientific study. As carbon dioxide emissions continue to rise, the world will experience more and more long-term environmental disruption. The damage will persist even when, and if, emissions are brought under control, says study author Susan Solomon, who is among the world's top climate scientists. "We're used to thinking about pollution problems as things that we can fix," Solomon says. "Smog, we just cut back and everything will be better later. Or haze, you know, it'll go away pretty quickly." That's the case for some of the gases that contribute to climate change, such as methane and nitrous oxide. But as Solomon and colleagues suggest in a new study published in the Proceedings of the National Academy of Sciences, it is not true for the most abundant greenhouse gas: carbon dioxide. Turning off the carbon dioxide emissions won't stop global warming. "People have imagined that if we stopped emitting carbon dioxide that the climate would go back to normal in 100 years or 200 years. What we're showing here is that's not right. It's essentially an irreversible change that will last for more than a thousand years," Solomon says. This is because the oceans are currently soaking up a lot of the planet's excess heat — and a lot of the carbon dioxide put into the air. The carbon dioxide and heat will eventually start coming out of the ocean. And that will take place for many hundreds of years.

#### It’s too late—Earth’s fate is sealed

Adve 8 [Nagraj. Staffer for the South Asia News. “Can We Avoid ‘Dangerous’ Global Warming” One World South Asia News, 23 April 08. Lexis]

As a consequence, the Earth’s average temperature has risen about 0.8 degrees C since the Industrial Revolution, reaching 14.5 degrees C in 2005. This seemingly mild rise has already caused lands to be nibbled by rising sea levels in the Sunderbans and the Gujarat coast, the 2005 floods in Bombay which killed a thousand people, Himalayan glaciers to recede, and rainfall patterns to change. According to the UN, 66 million people were affected by floods this year in South Asia alone. What used to seem ‘natural’ phenomena are not natural any more, as Bill McKibben lamented in The End of Nature nearly 20 years ago. The problem, as Paul Brown explains in Global Warming: The Last Chance for Change, is that there’s more warming in the pipeline. There’s a lag of about 25-30 years between greenhouse gases being emitted and the full effects of their warming. So the recent climate chaos is actually the consequence of emissions in the late 1970s. The full effects of more recent emissions, including from China’s coal-based power stations that some are suddenly and rightly concerned about, will be felt in the years to come. We are committed, Brown writes, to a further 0.7 degrees C. That would add up to 1.5 degrees C above pre-industrial levels. At 1.5 degrees, 18% of the world’s species will die, and 400 million more people worldwide will be exposed to water stress. It gets worse. As the Earth gets warmer, it will trigger off certain ‘feedbacks’, which could be understood as the Earth’s systems themselves contributing to warming: as Arctic ice melts, there will be less of it to reflect heat, warming further, melting

### 2NC Slow Now

#### Gas and developing countries offset US emissions reductions

Marshall 12 (Michael, climate reporter – New Scientist, 8/20/’12, <http://www.newscientist.com/article/dn22196-lowest-us-carbon-emissions-wont-slow-climate-change.html>)

It looks like good news, but it's not. The US has recorded a sharp fall in its greenhouse gas emissions from energy use. Thanks to a rise in the use of natural gas, emissions are at their lowest since 1992. The fall will boost the natural gas industry, but in reality the emissions have simply been exported. According to the US Energy Information Administration (EIA), energy-related CO2 emissions in the first quarter of 2012 were the lowest in two decades. Emissions are normally high between January and March because people use more heating in the winter, but last winter was mild in the US. The EIA says that an increase in gas-fired power generation, and a corresponding decline in coal-fired, contributed to the fall in emissions. Burning natural gas produces fewer emissions than burning coal, and natural gas is currently unusually cheap in the US thanks to a glut of shale gas extracted by hydraulic fracturing or "fracking". If gas companies continue to expand their shale gas operations, the US could generate even more electricity from gas, and its emissions could fall for several years, says Kevin Anderson of the University of Manchester, UK. However, this will not slow down climate change. US coal consumption has fallen, but production is holding steady and the surplus is being sold to Asia. As a result, the US is effectively exporting the coal-related emissions. "Gas is less bad than burning the coal, but only if you keep the coal in the ground," Anderson says. Proponents of natural gas argue that it is a "transition fuel" that we can burn for a few years while we install low-carbon infrastructure such as wind farms and nuclear power stations. That viewpoint looks increasingly untenable. "If we want even an outside chance of [limiting global warming to] 2 °C, there is no emission space for gas," Anderson says. In order to hit the 2 °C target, global emissions need to peak by 2020 before dropping again, which means making a rapid transition to low-carbon energy.

**Decade of cooling – 98-08 was the coolest decade on record**

**Carter 11** (Robert M., PhD, University of Cambridge, marine geologist and research professor at James Cook University in Queensland, Australia, Climate Change Reconsidered: 2011 Interim Report, 8-29-11, <http://www.nipccreport.org/reports/2011/pdf/FrontMatter.pdf>)

Recent reconstructions of climate history find the human influence does not stand out relative to other, natural causes of climate change. While global warming theory and models predict polar areas would warm most rapidly, the warming of Greenland was 33 percent greater in magnitude in 1919–1932 than it was in 1994–2007, and **Antarctica** **cooled** during the second half of the twentieth century.  Perlwitz et al. (2009) reported ―**a decade-long decline** (1998–2007) in globally averaged temperatures from the record heat of 1998‖ and noted U.S. temperatures in 2008 ―not only declined from near-record warmth of prior years, but were in fact colder than the official 30-year reference climatology … and further were **the coldest** since at least 1996.‖  New research disputes IPCC‘s claim that it has ferreted out all significant influences of the world‘s many and diverse urban heat islands from the temperature databases they use to portray the supposedly unprecedented warming of the past few decades.

**Temperature tracking data confirms**

**Morano 8** (Marc Morano, the communications director for the Republican minority on the Senate Environment and Public Works Committee, “Earth's 'Fever' Breaks: Global COOLING Currently Under Way,” 2-27-8, http://epw.senate.gov/public/index.cfm?FuseAction=Minority.Blogs&ContentRecord\_id=5CEAEDB7-802A-23AD-4BFE-9E32747616F9

Excerpt: All four major global temperature tracking outlets (Hadley, NASA's GISS, UAH, RSS) have released updated data. All show that over the past year, global temperatures have **dropped precipitously**. A compiled list of all the sources can be seen here. The total amount of cooling ranges from 0.65C up to 0.75C -- a value large enough to erase nearly **all the global warming** recorded over the past 100 years. All in one year time. For all sources, it's the single fastest temperature change every recorded, either up or down. […] Over the past year, anecdotal evidence for a cooling planet has exploded. China has its coldest winter in 100 years. Baghdad sees its first snow in all recorded history. North America has the most snowcover in 50 years, with places like Wisconsin the highest since record-keeping began. Record levels of **Antarctic sea ice**, record cold in Minnesota, Texas, Florida, Mexico, Australia, Iran, Greece, South Africa, Greenland, Argentina, Chile -- the list goes on and on. No more than anecdotal evidence, to be sure. But now, that evidence has been supplanted by hard scientific fact. All four major global temperature tracking outlets (Hadley, NASA's GISS, UAH, RSS) have released updated data. All show that over the past year, global temperatures have dropped precipitously.

**Peer-reviewed sources agree**

**Carter 11** (Robert M., PhD, University of Cambridge, marine geologist and research professor at James Cook University in Queensland, Australia, Climate Change Reconsidered: 2011 Interim Report, 8-29-11,

<http://www.nipccreport.org/reports/2011/pdf/03Temperature.pdf>)

In a paper titled ―A strong bout of natural **cooling in 2008**‖ published in Geophysical Research Letters Perlwitz et al. (2009) discuss the ―**precipitous drop** in North American temperature in 2008, commingled with a decade-long fall in global mean temperatures.‖ The authors begin their narrative by noting there has been ―a decade-long decline (1998–2007) in globally averaged temperatures from the record heat of 1998,‖ citing Easterling and Wehner (2009). In further describing this phenomenon, they note U.S. temperatures in 2008 ―not only declined from near record warmth of prior years, but were in fact colder than the official 30-year reference climatology (0.2°C versus the 1971–2000 mean) and further were the coldest since at least 1996.‖ With respect to the geographical origin of this ―natural cooling,‖ as they describe it, the five researchers point to ―a widespread coolness of the tropical-wide oceans and the northeastern Pacific,‖ focusing on the Niño 4 region, where they report ―anomalies of about -1.1°C suggest a condition colder than any in the instrumental record **since 1871**.‖ The researchers then push ahead in search of the cause of the global and U.S. coolings that sparked their original interest, seeking out what connects them with other more primary phenomena, the anomalous and significant oceanic coolings. Perlwitz et al. first **discount volcanic** eruptions, noting ―there were no significant volcanic events in the last few years.‖ Next, they write that solar forcing ―is also unlikely,‖ because its radiative magnitude is considered to be too weak to elicit such a response. And these two castaway causes thus leave them with ―coupled ocean-atmosphere-land variability‖ as the ―most likely‖ cause of the anomalous coolings.

### 2NC No XTC

#### Adaptation solves catastrophic impacts to warming

Goklany 11 -- PhD, author and researcher associated with IPCC, expert reviewer and U.S. delegate to that organization (Dr. Indur M., 12/11, "Misled on Climate Change: How the UN IPCC (and others) Exaggerate the Impacts of Global Warming," http://goklany.org/library/Reason%20CC%20and%20Development%202011.pdf)

So how much of a difference in impact would consideration of both economic development and technological change have made? If impacts were to be estimated for five or so years into the future, ignoring changes in adaptive capacity between now and then probably would not be fatal because neither economic development nor technological change would likely advance substantially during that period. However, the time horizon of climate change impact assessments is often on the order of 35–100 years or more. The Fast Track Assessments use a base year of 1990 to estimate impacts for 2025, 2055 and 2085. 39 The Stern Review’s time horizon extends to 2100– 2200 and beyond. 40 Over such periods one ought to expect substantial advances in adaptive capacity due to increases in economic development, technological change and human capital. As already noted, retrospective assessments indicate that over the span of a few decades, changes in economic development and technologies can substantially reduce, if not eliminate, adverse environmental impacts and improve human well-being, as measured by a variety of objective indicators. 41 Thus, not fully accounting for changes in the level of economic development and secular technological change would understate future adaptive capacity, which then could overstate impacts by one or more orders of magnitude if the time horizon is several decades into the future. The assumption that there would be little or no improved or new technologies that would become available between 1990 and 2100 (or 2200), as assumed in most climate change impact assessments, is clearly naïve. In fact, a comparison of today’s world against the world of 1990 (the base year used in most impacts studies to date) shows that even during this brief 20-year span, this assumption is invalid for many, if not most, human enterprises. Since 1990, for example, the portion of the developing world’s population living in absolute poverty declined from 42% to 25%, 42 and in sub-Saharan Africa Internet users increased from 0 to 50 million, while cellular phone users went from 0 per 100 to 33 per 100. 43 It should be noted that some of the newer impacts assessments have begun to account for changes in adaptive capacity. For example, the CIESIN study of 2006, in an exercise exploring the vulnerability to climate change under various climate change scenarios, allowed adaptive capacity to increase between the present and 2050 and 2100. 44 However, the researchers arbitrarily limited any increase in adaptive capacity to “either the current global mean or to a value that is 25% higher than the current value—whichever is higher.” 45 Such a limitation would, for example, have missed most of the increase in U.S. adaptive capacity during the twentieth century that virtually eliminated death and disease from climate-sensitive water-borne vector diseases. More recently, another study analyzed the sensitivity of deaths from malaria, diarrhea, schistosomiasis and dengue fever to warming, economic development and other determinants of adaptive capacity through the year 2100. 46 The results indicate, unsurprisingly, that economic development alone could reduce mortality substantially. For malaria, for instance, deaths would be eliminated before 2100 in a number of the more affluent sub-Saharan countries. 47

#### Experts agree

Hsu 10 (Jeremy, Live Science Staff, July 19, pg. <http://www.livescience.com/culture/can-humans-survive-extinction-doomsday-100719.html>)

His views deviate sharply from those of most experts, who don't view climate change as the end for humans. Even the worst-case scenarios discussed by the Intergovernmental Panel on Climate Change don't foresee human extinction. "The scenarios that the mainstream climate community are advancing are not end-of-humanity, catastrophic scenarios," said Roger Pielke Jr., a climate policy analyst at the University of Colorado at Boulder. Humans have the technological tools to begin tackling climate change, if not quite enough yet to solve the problem, Pielke said. He added that doom-mongering did little to encourage people to take action. "My view of politics is that the long-term, high-risk scenarios are really difficult to use to motivate short-term, incremental action," Pielke explained. "The rhetoric of fear and alarm that some people tend toward is counterproductive." Searching for solutions One technological solution to climate change already exists through carbon capture and storage, according to Wallace Broecker, a geochemist and renowned climate scientist at Columbia University's Lamont-Doherty Earth Observatory in New York City. But Broecker remained skeptical that governments or industry would commit the resources needed to slow the rise of carbon dioxide (CO2) levels, and predicted that more drastic geoengineering might become necessary to stabilize the planet. "The rise in CO2 isn't going to kill many people, and it's not going to kill humanity," Broecker said. "But it's going to change the entire wild ecology of the planet, melt a lot of ice, acidify the ocean, change the availability of water and change crop yields, so we're essentially doing an experiment whose result remains uncertain."

#### Warming will be slow, there’s no impact, and adaptation solves

William Yeatman 9, Energy Policy Analyst at the Competitive Enterprise Institute, February 3, 2009, “Global Warming 101: Science,” online: <http://www.globalwarming.org/2009/02/03/global-warming-101-science/>

A “planetary emergency—a crisis that threatens the survival of our civilization and the habitability of the Earth”—that is how former Vice President Al Gore describes global warming. Most environmental groups preach the same message. So do many journalists. So do some scientists.

In fact, at the 2008 annual meeting of Nobel Prize winners in Lindau, Germany, half the laureates on the climate change panel disputed the so-called consensus on global warming.

You have probably heard the dire warnings many times. Carbon dioxide (CO2) from mankind’s use of fossil fuels like coal, oil, and natural gas is building up in the atmosphere. Carbon dioxide is a greenhouse gas—it traps heat that would otherwise escape into outer space. Al Gore warns that global warming caused by carbon dioxide emissions could increase sea levels by 20 feet, spin up deadly hurricanes. It could even plunge Europe into an ice age.

Science does not support these and other scary predictions, which Gore and his allies repeatedly tout as a “scientific consensus.” Global warming is real and carbon dioxide emissions are contributing to it, but it is not a crisis. Global warming in the 21 st century is likely to be modest, and the net impacts may well be beneficial in some places. Even in the worst case, humanity will be much better off in 2100 than it is today.

The following is a summary of key points:

Average Annual Heat-Related Mortality: People will not drop like flies from heat waves in a warming world. Heat-related mortality will continue to decline as the world warms.

Far more people die each year from excess cold than from excess heat.

Global warming will not make air pollution worse.

Global warming will not lead to malaria epidemics in Northern Hemisphere countries.

Contrary to Gore, no “strong, new scientific consensus is emerging” that global warming is making hurricanes stronger.

Global Death & Death Rates Due to Extreme Events, 1900-2004: Since the 1920s, death rates related to extreme weather declined by more than 98 percent globally. The impression conveyed by An Inconvenient Truth—that global warming is making the world a more dangerous place—is false.

Gore’s warning that global warming could shut down the Atlantic branch of the oceanic thermohaline circulation (THC) and plunge Europe into an ice age is science fiction.

Gore’s warning that sea levels could rise by 20 feet is science fiction. Sea level rise in the 21 st century is likely to be measured in inches, not in feet.

The world warmed at a rate of 0.17°C per decade since 1978, according to the temperature record compiled by the United Nations Intergovernmental Panel on Climate Change (IPCC). Since most climate models predict that warming will occur at a constant—that is, non-accelerating—rate, it is reasonable to expect that global warming in the 21 st century will be close to the low end of the IPCC’s forecast range, of 1.4°C to 5.8°C.

The actual warming rate may be only half the 0.17°C per decade rate implied in the IPCC temperature record, because the IPCC has not adequately filtered out the warming biases from local factors like urbanization and improper management of monitoring equipment.

A warming near the low end of the IPCC range would produce both benefits—longer growing seasons, more rainfall, fewer cold deaths—and harms—more heat waves, more drought, some acceleration of sea level rise—but nothing resembling catastrophe.

Even in the IPCC high-end warming forecasts, human welfare would improve dramatically over the next 100 years. In the IPCC fossil-fuel-intensive development scenario, per capita GDP in developing countries increases from $875 per year in 1990 to $43,000 per year in 2100—even after taking into account an additional 110 years of global warming. Even in the IPCC worst-case scenario, global warming is not the civilization-ending catastrophe Al Gore purports it to be.

#### Previous temperature spikes disprove the impact

Singer 11 (S. Fred, Robert M. and Craig, PhD physics – Princeton University and professor of environmental science – UVA, consultant – NASA, GAO, DOE, NASA, Carter, PhD paleontology – University of Cambridge, adjunct research professor – Marine Geophysical Laboratory @ James Cook University, and Idso, PhD Geography – ASU, “Climate Change Reconsidered,” 2011 Interim Report of the Nongovernmental Panel on Climate Change)

Research from locations around the world reveal a significant period of elevated air temperatures that immediately preceded the Little Ice Age, during a time that has come to be known as the Little Medieval Warm Period. A discussion of this topic was not included in the 2009 NIPCC report, but we include it here to demonstrate the existence of another set of real-world data that do not support the IPCC‘s claim that temperatures of the past couple of decades have been the warmest of the past one to two millennia. In one of the more intriguing aspects of his study of global climate change over the past three millennia, Loehle (2004) presented a graph of the Sargasso Sea and South African temperature records of Keigwin (1996) and Holmgren et al. (1999, 2001) that reveals the existence of a major spike in surface air temperature that began sometime in the early 1400s. This abrupt and anomalous warming pushed the air temperatures of these two records considerably above their representations of the peak warmth of the twentieth century, after which they fell back to pre-spike levels in the mid-1500s, in harmony with the work of McIntyre and McKitrick (2003), who found a similar period of higher-than-current temperatures in their reanalysis of the data employed by Mann et al. (1998, 1999).

#### No impact to warming

Idso and Idso 11 (Craig D., Founder and Chairman of the Board – Center for the Study of Carbon Dioxide and Global Change, and Sherwood B., President – Center for the Study of Carbon Dioxide and Global Change, “Carbon Dioxide and Earth’s Future Pursuing the Prudent Path,” February, <http://www.co2science.org/education/reports/> prudentpath/prudentpath.pdf)

As presently constituted, earth’s atmosphere contains just slightly less than 400 ppm of the colorless and odorless gas we call carbon dioxide or CO2. That’s only four-hundredths of one percent. Consequently, even if the air's CO2 concentration was tripled, carbon dioxide would still comprise only a little over one tenth of one percent of the air we breathe, which is far less than what wafted through earth’s atmosphere eons ago, when the planet was a virtual garden place. Nevertheless, a small increase in this minuscule amount of CO2 is frequently predicted to produce a suite of dire environmental consequences, including dangerous global warming, catastrophic sea level rise, reduced agricultural output, and the destruction of many natural ecosystems, as well as dramatic increases in extreme weather phenomena, such as droughts, floods and hurricanes. As strange as it may seem, these frightening future scenarios are derived from a single source of information: the ever-evolving computer-driven climate models that presume to reduce the important physical, chemical and biological processes that combine to determine the state of earth’s climate into a set of mathematical equations out of which their forecasts are produced. But do we really know what all of those complex and interacting processes are? And even if we did -- which we don't -- could we correctly reduce them into manageable computer code so as to produce reliable forecasts 50 or 100 years into the future? Some people answer these questions in the affirmative. However, as may be seen in the body of this report, real-world observations fail to confirm essentially all of the alarming predictions of significant increases in the frequency and severity of droughts, floods and hurricanes that climate models suggest should occur in response to a global warming of the magnitude that was experienced by the earth over the past two centuries as it gradually recovered from the much-lower-than-present temperatures characteristic of the depths of the Little Ice Age. And other observations have shown that the rising atmospheric CO2 concentrations associated with the development of the Industrial Revolution have actually been good for the planet, as they have significantly enhanced the plant productivity and vegetative water use efficiency of earth's natural and agro-ecosystems, leading to a significant "greening of the earth." In the pages that follow, we present this oft-neglected evidence via a review of the pertinent scientific literature. In the case of the biospheric benefits of atmospheric CO2 enrichment, we find that with more CO2 in the air, plants grow bigger and better in almost every conceivable way, and that they do it more efficiently, with respect to their utilization of valuable natural resources, and more effectively, in the face of environmental constraints. And when plants benefit, so do all of the animals and people that depend upon them for their sustenance. Likewise, in the case of climate model inadequacies, we reveal their many shortcomings via a comparison of their "doom and gloom" predictions with real-world observations. And this exercise reveals that even though the world has warmed substantially over the past century or more -- at a rate that is claimed by many to have been unprecedented over the past one to two millennia -- this report demonstrates that none of the environmental catastrophes that are predicted by climate alarmists to be produced by such a warming has ever come to pass. And this fact -- that there have been no significant increases in either the frequency or severity of droughts, floods or hurricanes over the past two centuries or more of global warming -- poses an important question. What should be easier to predict: the effects of global warming on extreme weather events or the effects of elevated atmospheric CO2 concentrations on global temperature? The first part of this question should, in principle, be answerable; for it is well defined in terms of the small number of known factors likely to play a role in linking the independent variable (global warming) with the specified weather phenomena (droughts, floods and hurricanes). The latter part of the question, on the other hand, is ill-defined and possibly even unanswerable; for there are many factors -- physical, chemical and biological -- that could well be involved in linking CO2 (or causing it not to be linked) to global temperature. If, then, today's climate models cannot correctly predict what should be relatively easy for them to correctly predict (the effect of global warming on extreme weather events), why should we believe what they say about something infinitely more complex (the effect of a rise in the air’s CO2 content on mean global air temperature)? Clearly, we should pay the models no heed in the matter of future climate -- especially in terms of predictions based on the behavior of a non-meteorological parameter (CO2) -- until they can reproduce the climate of the past, based on the behavior of one of the most basic of all true meteorological parameters (temperature). And even if the models eventually solve this part of the problem, we should still reserve judgment on their forecasts of global warming; for there will yet be a vast gulf between where they will be at that time and where they will have to go to be able to meet the much greater challenge to which they aspire

## 1NR – Electricity Prices

### Warming

#### Can adapt to warming – we’d move inland and curtail things that cause warming as it gets worse which checks the impact – Mendleson

#### Experts agree

Hsu 10 (Jeremy, Live Science Staff, July 19, pg. <http://www.livescience.com/culture/can-humans-survive-extinction-doomsday-100719.html>)

His views deviate sharply from those of most experts, who don't view climate change as the end for humans. Even the worst-case scenarios discussed by the Intergovernmental Panel on Climate Change don't foresee human extinction. "The scenarios that the mainstream climate community are advancing are not end-of-humanity, catastrophic scenarios," said Roger Pielke Jr., a climate policy analyst at the University of Colorado at Boulder. Humans have the technological tools to begin tackling climate change, if not quite enough yet to solve the problem, Pielke said. He added that doom-mongering did little to encourage people to take action. "My view of politics is that the long-term, high-risk scenarios are really difficult to use to motivate short-term, incremental action," Pielke explained. "The rhetoric of fear and alarm that some people tend toward is counterproductive." Searching for solutions One technological solution to climate change already exists through carbon capture and storage, according to Wallace Broecker, a geochemist and renowned climate scientist at Columbia University's Lamont-Doherty Earth Observatory in New York City. But Broecker remained skeptical that governments or industry would commit the resources needed to slow the rise of carbon dioxide (CO2) levels, and predicted that more drastic geoengineering might become necessary to stabilize the planet. "The rise in CO2 isn't going to kill many people, and it's not going to kill humanity," Broecker said. "But it's going to change the entire wild ecology of the planet, melt a lot of ice, acidify the ocean, change the availability of water and change crop yields, so we're essentially doing an experiment whose result remains uncertain."

### A2 Nuclear Loan Guarantees

#### No nuclear now

Timmer 2-5-13 (John, Arstechnica, “Steve Chu says goodbye to the Department of Energy,” 2-5-13,

<http://arstechnica.com/science/2013/02/steve-chu-says-goodbye-to-the-department-of-energy/>)

The DOE is a sprawling agency, responsible for everything from energy efficiency measures like house insulation to international nuclear proliferation (Chu's farewell notes that 10 percent of the US' electricity is now generated using uranium derived from Soviet warheads). The national labs it runs focus on basic and applied research, but the DOE also intervenes directly in the market, providing loan guarantees and funding to projects that are considered too risky to attract private financing. Not all of the latter programs have worked out especially well. Some of the stimulus money went to companies that failed as the financial crisis dragged on, though Chu's farewell letter takes pains to note that only one percent of the funded companies ended up entering bankruptcy. The loan guarantees were also intended to foster a resurgence in nuclear power, but the plunging cost of natural gas has put most plans for an expansion of nuclear energy on hold indefinitely.

#### Political barriers

Silverstein 13 (Ken, EnergyBiz,“Politics Mires Nuclear Loan Guarantee Process, Group Maintains,” 1-30-13,

<http://www.energybiz.com/article/13/01/politics-mires-nuclear-loan-guarantee-process-group-maintains>)

Three years after the U.S. Department of Energy approved an $8.3 billion loan guarantee to be used by Southern Co. and its partners to build two new nuclear reactors, the deal has yet to be finalized. A Georgia-based clean energy group says that the loan should shut down because it places taxpayers at extreme risk. Loan guarantees are not uncommon. In fact, they gained much of their notoriety as a result of the failure of solar company Solyndra, which lost about $528 million in taxpayer funds. But proponents of those loans say that the potential payback is far greater than the risks. In all cases, the purpose is to get seed money into the hands of energy developers, all to initiate first-of-their-kind projects that would ease the path for similar undertakings. “We have been critical of this program,” referring to the Energy Department’s issuance of all energy loans, says Doug Koplow, founder of Earth Track and co-author of a report for the Southern Alliance for Clean Energy and Friends of the Earth. “It lacks checks and balances and there are problems with oversight.”

### U – Prices Declining (NU)

#### Natural gas prices will stay low and plenty of shale now

Philips 1-10 (Matthew, Bloomberg Businessweek, “Why Natural Gas Will Stay Cheap in 2013,” 2013, http://www.businessweek.com/articles/2013-01-10/why-natural-gas-will-stay-cheap-in-2013)

Six weeks ago, natural gas bulls were riding high. By Thanksgiving, prices had more than doubled since hitting a decade low of $1.90 per million BTUs in April. Heading into what was supposed to be a cold winter for the U.S.—at least compared with last year—the consensus view was that natural gas prices would be higher in 2013, since about half of all U.S. households heat their homes with natural gas. By the end of December, the median forecast of 22 analysts surveyed by Bloomberg was that natural gas would average $3.75 for 2013. A few weeks of warm weather later, and a lot of those forecasts look way too optimistic. Prices have fallen more than 20 percent since peaking at $3.90 per million BTUs in late November. With the National Weather Service predicting above-normal temperatures over the next 10 days for the eastern third of the U.S., **that downward pressure is likely to continue**. “We’re going to see a lot of guys coming in and changing their forecasts,” says Laurent Key, an energy analyst at Societe Generale (SCGLY) in New York. Key expects prices to bottom out around an average of $3.16 in the second quarter before climbing. “If we end up repeating 2012, those expectations need to come down by about a buck,” says Scott Hanold, an energy analyst at RBC Capital Markets (RY) in Minneapolis. Goldman Sachs (GS) just lowered its 2013 price target by 50 cents, from $4.25 per million BTUs, to $3.75, still above the current price of $3.12. Natural gas is notoriously volatile, so prices could surge if the weather turns cold and people crank up their heat, but it’s hard to see that demand making up for what’s already been lost. Even if there is a February freeze across the country, that cold snap probably wouldn’t be sufficient to compensate for a mild December, Goldman analyst Johan Spetz wrote in a Jan. 7 research note. Bloomberg News reported Wednesday that Mike Fitzpatrick, editor of the Energy OverView newsletter, thinks natural gas prices could drop as low as $2.20 if the weather stays mild. The more likely scenario seems to be something akin to what happened last year, when prices fell through the spring and didn’t rise appreciably until people started turning on their air conditioners in May. Part of what helped lift natural gas prices off their lows last April was increased demand from utilities switching from coal to natural gas to generate electricity. But that effect might be more muted in 2013. After getting crushed by cheap natural gas over the last few years, coal appears set to recapture some of that market share in 2013. “Coal has become more competitive against natural gas,” says Lucas Pipes, an analyst at Brean Murray, Carret & Co. Coal prices have gotten so cheap that if natural gas rises to just $3.40 this year, Pipes estimates that would cause 50 million tons of coal demand to come on the market as utilities fire up their coal plants. The Department of Energy is forecasting that coal will account for 39 percent of all electricity generated in 2013, up from 37.6 percent last year. Meanwhile, natural gas’s continued run of increasing its share of the electricity market may be over. The DOE predicts that natural gas will lose ground this year and next, falling from 30.3 percent of all electricity generated in 2012, to 27.9 percent in 2013, and 27.5 percent in 2014. On top of that, natural gas production is set to rise by 0.5 percent this year, according to the DOE. After spending the previous 15 months reducing the number of rigs drilling for natural gas, U.S. producers finally started adding to that total in November, spurred perhaps by the prospect of sustained $4 prices. While production has slowed in some places, the Marcellus Shale in western Pennsylvania is still attracting new investment. “Marcellus is an animal. There are still 1,000 wells that haven’t been put online yet,” says Hanold. “That’s going to push production even higher.” Marcellus is also more immune to lower prices. The geology is so good, and the royalty rates so low, that producers can drill profitably even at $2 natural gas prices, he says. In the end, the fundamental issue that’s kept natural gas prices so low for the last few years—too much supply, inadequate demand—**appears here to stay for the foreseeable future.** ”Natural gas prices will be dead for at least two more years,” says Fadel Gheit, a senior oil and gas analyst at Oppenheimer (OPY). By dead he means well below $4. “The industry shot itself in the foot by overdrilling,” he says. “Now anybody and their brother can get gas out of the ground and into the system.”

### 2NC – Econ Impact Overview

#### Impact outweighs and turns the case –

#### A. Magnitude – US collapse goes global and draws in every major country – treaties increase the probability of draw in and guarantees escalation.

#### B. Timeframe – decline causes lash out and outward pressure to secure economic gains – that’s Auslin.

### Econ Collapse = War

#### Decline cause miscalculation and conflict – prefer statistically significant evidence

**Royal 10** (Jedediah, Director of Cooperative Threat Reduction – U.S. Department of Defense, “Economic Integration, Economic Signaling and the Problem of Economic Crises”, Economics of War and Peace: Economic, Legal and Political Perspectives, Ed. Goldsmith and Brauer, p. 213–215)

Less intuitive is how periods of economic decline may increase the likelihood of external conflict. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson's (1996) work on leadership cycle theory, finding that rhythms in the global economy are associated with the rise and fall of a pre–eminent power and the often bloody transition from one pre–eminent leader to the next. As such, exogenous shocks such as economic crises could usher in a redistribution of relative power (see also Gilpin. 1981) that leads to uncertainty about power balances, increasing the risk of miscalculation (Feaver, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner. 1999). Separately, Pollins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland's (1996, 2000) theory of trade expectations suggests that 'future expectation of trade' is a significant variable in understanding economic conditions and security behaviour of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However, if the expectations of future trade decline, particularly for difficult to replace items such as energy resources, the likelihood for conflict increases**,** as states will be inclined to use force to gain access to those resources. Crises could potentially be the trigger for decreased trade expectations either on its own or because it triggers protectionist moves by interdependent states.4 Third, others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict, particularlyduring periods of economic downturn. They write: The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the presence of a recession tends to amplify the extent to which international and external conflicts self–reinforce each other. (Blomberg & Hess, 2002. p. 89) Economic decline has also been linked with an increase in the likelihood of terrorism (Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government. "Diversionary theory" suggests that, when facing unpopularity arising from economic decline, sitting governments have increased incentives to fabricate externalmilitary conflicts to create a 'rally around the flag' effect. Wang (1996), DeRouen (1995). and Blomberg, Hess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that periods of weak economic performance in the United States, and thus weak Presidential popularity, are statistically linked to an increase in theuse of force. In summary, recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas political science scholarship links economic decline with external conflictat systemic, dyadic and national levels.5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic–security debate and deserves more attention.

#### Econ decline causes nuke war

Harris and Burrows 9 Mathew, PhD European History @ Cambridge, counselor in the National Intelligence Council (NIC) and Jennifer is a member of the NIC’s Long Range Analysis Unit “Revisiting the Future: Geopolitical Effects of the Financial Crisis” http://www.ciaonet.org/journals/twq/v32i2/f\_0016178\_13952.pdf Increased Potential for Global Conflict

Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample Revisiting the Future opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that the Great Depression is not likely to be repeated, the lessons to be drawn from that period include the harmful effects on fledgling democracies and multiethnic societies (think Central Europe in 1920s and 1930s) and on the sustainability of multilateral institutions (think League of Nations in the same period). There is no reason to think that this would not be true in the twenty–first as much as in the twentieth century. For that reason, the ways in which the potential for greater conflict could grow would seem to be even more apt in a constantly volatile economic environment as they would be if change would be steadier. In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorist groups that remain active in 2025, however, the diffusion of technologies and scientific knowledge will place some of the world’s most dangerous capabilities within their reach. Terrorist groups in 2025 will likely be a combination of descendants of long established groups\_inheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attacks\_and newly emergent collections of the angry and disenfranchised that become self–radicalized, particularly in the absence of economic outlets that would become narrower in an economic downturn. The most dangerous casualty of any economically–induced drawdown of U.S. military presence would almost certainly be the Middle East. Although Iran’s acquisition of nuclear weapons is not inevitable, worries about a nuclear–armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship that existed between the great powers for most of the Cold War would emerge naturally in the Middle East with a nuclear Iran. Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual–capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack. The lack of strategic depth in neighboring states like Israel, short warning and missile flight times, and uncertainty of Iranian intentions may place more focus on preemption rather than defense, potentially leading to escalating crises. 36 Types of conflict that the world continues to experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo–mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if government leaders deem assured access to energy resources, for example, to be essential for maintaining domestic stability and the survival of their regime. Even actions short of war, however, will have important geopolitical implications. Maritime security concerns are providing a rationale for naval buildups and modernization efforts, such as China’s and India’s development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. Buildup of regional naval capabilities could lead to increased tensions, rivalries, and counterbalancing moves, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. With water also becoming scarcer in Asia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult both within and between states in a more dog–eat–dog world.

#### Economic collapse causes extinction

**Bearden 00** (T.E., Director of Association of Distinguished American Scientists, The Unnecessary Energy Crisis: How to Solve It Quickly,” Space Energy Access Systems, http://www.seaspower.com/EnergyCrisis–Bearden.htm)

History bears out that desperate nations take desperate actions. Prior to the final economic collapse, the stress on nations will have increased the intensity and number of their conflicts, to the point where the arsenals of weapons of mass destruction (WMD) now possessed by some 25 nations, are almost certain to be released.  As an example, suppose a starving North Korea launches nuclear weapons upon Japan and South Korea, including U.S. forces there, in a spasmodic suicidal response. Or suppose a desperate China — whose long–range nuclear missiles (some) can reach the United States — attacks Taiwan. In addition to immediate responses, the mutual treaties involved in such scenarios will quickly draw other nations into the conflict, escalating it significantly. Strategic nuclear studies have shown for decades that, under such extreme stress conditions, once a few nukes are launched, adversaries and potential adversaries are then compelled to launch on perception of preparations by one's adversary.  The real legacy of the MAD concept is this side of the MAD coin that is almost never discussed. Without effective defense, the only chance a nation has to survive at all is to launch immediate full–bore pre–emptive strikes and try to take out its perceived foes as rapidly and massively as possible. As the studies showed, rapid escalation to full WMD exchange occurs. Today, a great percent of the WMD arsenals that will be unleashed, are already on site within the United States itself. The resulting great Armageddon will destroy civilization as we know it, and perhaps most of the biosphere, at least for many decades.

#### Growth solves war – econometric studies prove

**Hupreys 03** (Macartan Huphreys is a Associate Professor, Department of Political Science, Columbia University And Director, Center for the Study of Development Strategies Feb 2003 “Economics and Violent Conflict” http://www.unglobalcompact.org/docs/issues\_doc/Peace\_and\_Business/Economics\_and\_Violent\_Conflict.pdf)

One might expect rich nations to be more violent than poor ones because the rich ones have more to fight over. 10 The econometric evidence however suggests the opposite. Most research shows that wealth reduces the likelihood of civil war, 11 and that economic growth also reduces risks while recessions worsen them. Figures derived from World Bank econometric models (Figure 1) show a striking relationship between the wealth of a nation and its chances of having a civil war. 12 The figure suggests that differences in wealth are most relevant among poorer countries. A country with GDP per person of just $250 has a predicted probability of war onset (at some point over the next five years) of 15%, even if it is otherwise considered an “average” country. This probability of war reduces by half for a country with GDP of just $600 per person and is reduced by half again to below 4% for a country with income of $1250. Countries with income per person over $5000 have a less than 1% chance of experiencing civil conflicts, all else being equal. There are various explanations for why this is so. But so far little work has been undertaken to distinguish between them. The most common is that wealthier societies are better able to protect assets, thus making violence less attractive for would–be rebels. 13 Another explanation, given by political scientist Thomas Homer Dixon argues that poverty causes violence, and points to cases where scarcity leads to migrations that result in conflicts between identity groups over resources. Alternatively, the relationship could be spurious in the sense that there are other features of a country, such as a democratic culture, that make it at once more prosperous and less violent. And causality may in fact run in the opposite direction: rich countries may be rich in part because they have had little civil conflict in their recent past. 14 Whatever the reason, the figures suggest that growth oriented initiatives and conflict prevention initiatives are mutually reinforcing. And the figures provide a rationale for those who say that it is in the interest of wealthy nations to promote economic growth in poor countries in order to avoid the spillover effects of likely conflicts there. In terms of policy implications, the analysis suggests that the greatest gains in conflict prevention are to be made by focusing development efforts on the very poor rather than on countries of intermediate wealth.

#### Growth solves conflict

**Marquardt 5** (Michael J., Professor of Human Resource Development and International Affairs, George Washington University, Globalization: The Pathway to Prosperity, Freedom and Peace,” Human Resource Development International, March 2005, Volume 8, Number 1, pg. 127–129)

Perhaps the greatest value of globalization is its potential for creating a world of peace. Economic growth has been identiﬁed as one of the strongest forces that turn people away from conﬂict and wars among groups, tribes, and nations. Global companies strongly discourage governments from warring against countries in which they have investments. Focusing on economic growth encourages cooperation and living in relative peace (Marquardt, 2001, 2002).

### Econ Outweighs – Probability

#### Probability –– conflict now is highly likely given other economic stressors

Mootry 9 (Primus, B.A. Northern Illinois University “Americans likely to face more difficult times” – The Herald Bulletin, http://www.theheraldbulletin.com/columns/local\_story\_282184703.html?keyword=secondarystory)

These are difficult times. The direct and indirect costs associated with the war on Iraq have nearly wrecked our economy. The recent $700 billion bailout, bank failures, and the failure of many small and large businesses across the nation will take years — perhaps decades — to surmount. Along with these rampant business failures, we have seen unemployment rates skyrocket, record numbers of home foreclosures, an explosion of uninsured Americans, and other economic woes that together have politicians now openly willing to mention the "D" word: Depression. These are difficult days. We have seen our international reputation sink to all time lows. We have seen great natural disasters such as hurricanes Ike and Katrina leaving hundreds of thousands of citizens stripped of all they own or permanently dislocated. In all my years, I have never seen a time such as this. To make matters worse, we are witnessing a resurgence of animosities between the United States and Russia, as well as the rapid growth of India and China. As to the growth of these two huge countries, the problem for us is that they are demanding more and more oil — millions of barrels more each week — and there is not much we can say or do about it. In the meantime, if America does not get the oil it needs, our entire economy will grind to a halt. In short, the challenges we face are complex and enormous. Incidentally, one of the factors that makes this time unlike any other in history is the potential for worldwide nuclear conflict. **There has never been a time in** the long **history** of man **when**, through his own technologies — and his arrogance — he can destroy the planet. Given the tensions around the world, **a mere spark could lead to global conflagration.**[This evidence has been gender paraphrased].

### Econ Impact

**Turns both advantages**

O’Hanlon 12 — Kenneth G. Lieberthal, Director of the John L. Thornton China Center and Senior Fellow in Foreign Policy and Global Economy and Development at the Brookings Institution, former Professor at the University of Michigan, served as special assistant to the president for national security affairs and senior director for Asia on the National Security Council, holds a Ph.D. from Columbia University, and Michael E. O'Hanlon, Director of Research and Senior Fellow in Foreign Policy at the Brookings Institution, Visiting Lecturer at Princeton University, Adjunct Professor at Johns Hopkins University, holds a Ph.D. from Princeton University, 2012 (“The Real National Security Threat: America's Debt,” *Los Angeles Times*, July 10th, Available Online at http://www.brookings.edu/research/opinions/2012/07/10-economy-foreign-policy-lieberthal-ohanlon, Accessed 07-12-2012)

Lastly, American economic weakness undercuts U.S. leadership abroad. Other countries **sense our weakness** and wonder about our purported decline. If this perception becomes more widespread, and the case that we are in decline becomes more persuasive, countries will begin to **take actions that reflect their skepticism about America's future**. Allies and friends will **doubt our commitment** and may **pursue** nuclear weapons for their own security, for example; adversaries will **sense opportunity** and be **less restrained in throwing around their weight** in their own neighborhoods. The crucial Persian Gulf and Western Pacific regions will likely become **less stable**. Major war will become more likely. When running for president last time, Obama eloquently articulated big foreign policy visions: healing America's breach with the Muslim world, controlling global **climate change**, dramatically curbing **global poverty** through development aid, moving toward a world free of **nuclear weapons**. These were, and remain, worthy if elusive goals. However, for Obama or his successor, there is now **a much more urgent big-picture issue: restoring U.S.** economic strength**. Nothing else is really possible if that fundamental prerequisite to effective foreign policy is not reestablished**.

### Nuclear Power – 2NC

#### Group the link debate –

#### Nuclear power drives up electricity prices – rising construction costs and lower efficiency ratings compared to renewable guarantee higher prices – that’s Cooper. All of those costs get directly placed on ratepayers, not the company. Prefer our evidence – it’s from an economic analyst. All of their evidence is from the nuclear industry that are bias and have an incentive to lie.

#### Link outweighs the link turn – even failed projects jack up the price

Madsen et al 9 (Travis, Analyst @ Frontier Group and Maryland PIRG Foundation, Johanna Neumann @ Maryland PIRG Foundation, and Emily Rusch @ CalPIRG Education Fund, "The High Cost of Nuclear Power," <http://www.nirs.org/nukerelapse/calvert/highcostnpower_mdpirg.pdf>)

N o power company has successfully ordered a nuclear reactor in the United States since 1973. Despite promises of power that would be “too cheap to meter,” the last generation of nuclear reactors ran aground on skyrocketing construction costs. Of 75 nuclear reactors completed between 1966 and 1986, the average reactor cost more than triple its original construction budget. 1 Later–built reactors came in as much as 1,200 percent over–budget. 2 In 1985, Forbes magazine wrote that “the failure of the U.S. nuclear power program ranks as the largest managerial disaster in business history, a disaster on a monumental scale.” 3 Electricity customers ended up paying the price. Only one–half of the reactors proposed were ever built, and ratepayers often had to bear the costs of abandoned projects. Where reactor projects were completed, rates often increased. Finally, during the restructuring of the electricity industry in the 1990s, ratepayers were saddled with billions in “stranded costs” from failed investments in nuclear power, saving nuclear power plant owners (and their shareholders) from huge losses.

#### Nuclear power triples the cost that consumers pay

Madsen et al 9 (Travis, Analyst @ Frontier Group and Maryland PIRG Foundation, Johanna Neumann @ Maryland PIRG Foundation, and Emily Rusch @ CalPIRG Education Fund, "The High Cost of Nuclear Power," <http://www.nirs.org/nukerelapse/calvert/highcostnpower_mdpirg.pdf>)

Compounding the problem are the high cost estimates for new nuclear reactors. Some estimates of the cost of power from a new nuclear reactor range as high as 25 to 30 cents per kWh – triple electricity rates in most parts of the country. 57 Adding power at even half this price to a service territory could increase the cost that consumers pay for electricity, motivating additional efforts to conserve and dampening the power demand the plant was built to serve. This exact situation contributed to the failure of the last wave of nuclear power plant construction in the United States. Dozens of reactors were cancelled, and billions of dollars in unnecessary investment were lost.

#### Nuclear power displaces the low prices of natural gas – causes spikes in consumers rate

Niemeyer 3/6/12 (Kyle, science writer for Ars Technica. He has B.S. and M.S. degrees in Aerospace Engineering from Case Western Reserve University, and is currently a Ph.D. candidate focusing on combustion modeling, "Chain reaction: the (slow) revival of US nuclear power," [http://arstechnica.com/science/2012/03/chain–reaction–the–slow–revival–of–us–nuclear–power/](http://arstechnica.com/science/2012/03/chain-reaction-the-slow-revival-of-us-nuclear-power/))

Proponents for greater use of nuclear power often tout its low cost and zero emissions. According to the US Energy Information Administration, electricity from nuclear power will cost 11.39 cents per kilowatt hour (kWh) in 2016. By comparison, conventional coal plants would generate electricity at 9.5 cents per kWh and onshore wind at 9.7 cents per kWh. Advanced natural gas plants offer by far the lowest cost at 6.6 cents per kWh. However, it isn’t the cost of electricity that’s the problem. The largest barrier to more nuclear power plants may be the initial cost of construction. According to the report, the capital cost of nuclear plants always escalated over original estimates. The final costs of plants built through 1980—meaning all of them, since only one has been built since 1978—were on average 50 percent higher than comparable coal plants. This even includes retrofits to the coal plants to meet the higher emissions standards of the Clean Air Act. Comparison of electricity costs from nuclear, coal, and gas from different studies. Wikimedia Commons Cost escalation remains an issue. A group of companies announced a two–reactor project in Texas in 2006, with an estimated cost of $5.2 billion. Three years later, the cost was revised to $10 billion, then $13 billion a few weeks later. The final estimate eventually reached $18.2 billion, over three times the original estimate. That's more expensive than an equivalently–sized natural gas plants, which also wouldn’t take nearly as long to build. Considering the increasingly low price of electricity from natural gas, the report emphasized the need for some sort of carbon pricing to make nuclear attractive. Natural gas power plants are beginning to replace coal plants and they emit about half the greenhouse gases. Without a price on carbon dioxide emissions, nuclear power is actually more expensive than coal, oil, or natural gas, due to the massive upfront cost.

**Electricity prices are low but nuclear power construction prices raise them**

**Wald 10–23**–12(Matthew L, NYT, "Aging and Expensive, Reactors Face Mothballs", http://www.nytimes.com/2012/10/24/business/energy–environment/economics–forcing–some–nuclear–plants–into–retirement.html?\_r=0)

THE conventional wisdom about nuclear reactors is that they are expensive to build but cheap to run. But electricity on the wholesale market is so inexpensive, its price depressed by cheap natural gas, that some reactors may not have enough revenue to justify needed capital expenditures. Experts say that as a result, the nuclear industry may be nearing its first round of retirements since the mid–1990s. On Monday, Dominion, which is based in Richmond, Va., announced it would close its plant in Kewaunee, Wis., which it had been trying, unsuccessfully, to sell for about a year. It had intended to buy more units in the Midwest and gain efficiencies by operating a fleet there, but found it could not do so. When Dominion bought the plant, in 2005, it signed agreements to sell the plant’s output at rates reflecting a strong market for electricity. As those agreements expire, with a projection for continued lower prices, it is “uneconomic for Kewaunee to continue operations,” the company said. That could be a harbinger of more closings, but it is not the only trouble sign for the industry. Some plants, like Indian Point in New York and Vermont Yankee, face determined political challenges to their continued operation. But plain old economics could affect a lot more plants, including Crystal River, north of Tampa on Florida’s Gulf Coast, which has not run since September 2009, when it shut down for replacement of major components. The installation job may have damaged the containment building, which may not be worth the $1.3 billion or so it would take to fix. In New Jersey, Exelon agreed in late 2010 to shut down the Oyster Creek reactor, the nation’s oldest operating commercial plant, by 2019 rather than rebuild its cooling system to meet environmental rules. In California, the San Onofre reactors closed in 2012 after apparently flawed new heat exchangers developed leaks. Even plants with no pressing repair problems are feeling the pinch, especially in places where wholesale prices are set in competitive markets. According to an internal industry document from the Electric Utility Cost Group, for the period 2008 to 2010, maintenance and fuel costs for the one–fourth of the reactor fleet with the highest costs averaged $51.42 per megawatt hour. That is perilously close to wholesale electricity costs these days. Bruce E. Biewald, the chief executive of Synapse Energy Economics, a consulting firm in Cambridge, Mass., compared the nuclear plants to old coal plants now facing big capital expenses. The cost of new pollution control equipment has coal companies “writing off hundreds of millions of dollars right and left,” he said. Much the same is now true for nuclear plants. “An asset that might have been worth a couple of billion dollars is now basically worthless,” he said. And with average costs approximating average revenue, some reactors face higher–than–average costs.

### 2NC – Prices Key to Manufacturing

#### Prices are key to manufacturing – companies are making the move to the US due to low electricity prices. The plan causes those companies to move back offshore – removing any competitive advantage the US has in terms of economic growth.

#### This is an important framing issue – we don’t have to win “total collapse of the industry” just that they move out of the US – that’s Perry

#### Independently they’ve conceded that higher prices jack consumer spending which are poised to inject an energy based stimulus to the economy which is also the Perry evidence

#### Cheap energy is a driving factor for manufacturing reshoring

Washington Post 11-19 [“American manufacturing is coming back. Manufacturing jobs aren’t”, November 19th, 2012, <http://www.washingtonpost.com/blogs/wonkblog/wp/2012/11/19/american-manufacturing-is-coming-back-manufacturing-jobs-arent/>, Chetan]

And another advantage for the United States is relatively affordable energy, thanks in no small part to lots of supply of natural gas. There are some sectors of manufacturing, such as of wood products, refined petroleum, and basic metals, in which energy is an overwhelming driver of costs. It is therefore most economical to locate production in the places with the cheapest energy, even if labor costs are high. That increasingly fits the United States to a tee.

#### We have a unique internal link – economic growth is happening because of manufacturing “rehoring” that’s occurring due to low electricity prices – the plan reverses that trend

Schoenberger 12 (Robert, Plain Dealer, "Shale gas boom could bring manufacturing jobs back to U.S., economists say," <http://www.cleveland.com/shalegas/index.ssf/2012/05/shale_gas_boom_could_bring_man.html>)

"By 2025, the manufacturing sector alone could save $11.5 billion in energy costs," Robert McCutcheon, an economist with consulting group PwC, said at a manufacturing summit hosted by the Federal Reserve Bank of Cleveland. McCutcheon's company, formerly called PriceWaterhouseCoopers, released a study late last year predicting that as many as 1 million new U.S. manufacturing jobs could come from lower–cost energy. "If we save $11.5 billion, that's investment capital that could be redirected elsewhere," McCutcheon added. Cleveland Fed President and Chief Executive Sandra Pianalto said manufacturing businesses have been leading the economic recovery in the United States for the past two years, but she added that job growth hasn't been as strong as profit and sales growth. To add jobs, the sector needs to attract new manufacturers and bring production back to the United States from other countries. That's where shale gas and cheap energy could come in. Pianalto said one steel producer told her recently that energy costs in North America are one–third the cost of European steel plants [reporter's note: an earlier version of this story said U.S. costs were one–tenth of Europe's. Pianalto's office said the Cleveland Fed chief went over her notes and found that one–third was the more accurate figure]. Those costs, coupled with weak demand, has ArcelorMittal expanding in Ohio while it cuts production in Europe. Several other steel plants in the region have also increased production to sell pipeline tubes and other parts to oil and gas companies. Marianne Kah, chief economist for energy company ConocoPhillips, called the ongoing shale boom the "most significant change in the energy industry since the 1940s." Kah said over the past five years, energy companies have learned that most of their early predictions on shale gas were wrong. The companies knew that there were huge reserves of oil and gas trapped within hard rocks that needed to be hydraulically fractured to release that energy, but they vastly overestimated the costs of doing that. Production in Texas and Pennsylvania has produced far more gas, far more cheaply than the industry expected, and gas prices are now near historic lows. Low gas costs have drawn huge interest from chemical companies that convert natural gas into plastics and other materials. In March, Shell Oil said it would build a multi–billion petrochemical refinery near Pittsburgh. Several other chemical plants have announced shale–related expansions. "And these are the very early days. We're likely to learn a lot more about how to optimize this process" and lower production costs in the future, she added. From a competitive standpoint, she said shale is already making the United States a more attractive place to do business. Natural gas prices are lower here than in China, Germany of Great Britain. William Strauss, senior economist for the Federal Reserve Bank of Chicago, said the boom has meant U.S. electricity prices are the lowest of any industrial nation in the world. Those low energy prices could help the country lure back work sent to Asia over the years where low–cost labor has been the draw. Strauss said labor is still cheaper overseas, but the total production costs can be higher after figuring in energy and the cost to ship goods across the Pacific Ocean.

#### Inelastic demand magnifies our link – demand stays the same and prices only go up

Smith 12 (Bob, Analyst in Government Actions @ Smart Energy Universe, "SENATOR INHOFE: SENATE WILL VOTE IN NEXT TWO WEEKS ON EFFORT TO STOP WAR ON COAL," http://smartenergyuniverse.com/government–actions/2575–senator–inhofe–senate–will–vote–in–next–two–weeks–on–effort–to–stop–war–on–coal)

Manufacturers will be particularly hard hit due to their reliance on low cost electricity and because of their dependence on natural gas as a raw material, as both electricity rates and natural gas prices increase. According to Nucor steel, a 1 cent increase in electricity rates costs the firm $120 million. These extra costs could endanger a million manufacturing jobs outside of the coal and utility industries. Utility MACT will also have a negative ripple effect. Just to bring up one example, in Avon Lake, Ohio, the closure of the local GenOn power plant will cost the school system 11% of its budget annually. Besides the 80 high–quality jobs lost at the plant and many indirect jobs lost in the community, the city will have fewer resources for its paramedic and firefighting services. This story will be replicated at communities across the country.

### 2NC – Consumer Spending Internal Link

#### Higher electricity prices trade–off with consumer spending within other sectors of the economy

USA Today 3/28/02 (lexis)

When consumers have to spend more to fill up the tanks in their cars and to heat or cool their homes, they have less to spend in other sectors of the economy. That's important because consumer spending accounts for two–thirds of U.S. economic activity, and it isn't good to have it all spent in one place. Macroeconomic Advisors estimates that energy cost increases in 2000 subtracted as much as 0.6% from the growth of real disposable personal income. Last year, the decline in prices added a little more than a half percentage point to income growth, the group estimates.

#### Consumer spending is the backbone of US growth

Lazzaro 8/6/12 (Joseph, International Business Times, "Globalization: The Economic Structural Changes Continue," <http://www.ibtimes.com/articles/370786/20120806/globalization–jobs–unemployment–income–corporations–trade–rate.htm>)

At the outset of the 2007–2009 U.S. recession, few doubted the link between U.S. consumer spending and U.S. GDP growth: if U.S. consumer spending dips, GDP growth pulls–back; a deep, protracted decline in spending, and a recession ensues. It happened, starting in December 2007, as it had in many previous U.S. cyclical downturns/recessions. However, few onlookers could have imagined –– there was no precedent, the world had never experienced a cross–hemisphere trade period with as many linkages as it had in 2002–2007 –– the revelation of the relationship between the U.S. consumer and global GDP growth. It's now pretty clear that the U.S. consumer was not only the backbone of the U.S. economy, John and Jane Smith were driving much of global GDP growth, as well.

### Uniqueness Wall – 2NC

#### Group the uniqueness debate –

#### Electricity prices are on the decline and will remain low for the next years – the natural gas boom means that current supply is already meeting demand – that’s Burtraw. Prefer our evidence –

#### A. Predictive – it assumes rising demands for the next 20 years, their evidence is a snapshot and doesn’t occur for future changes.

#### B. More qualified – Burtraw is an expert is the electricity sector – their evidence is from a random news outlet.

#### Uniqueness determines the direction of the link – the only chance for consequence is a scenario where the plan increases prices. It means there’s no chance of their link turn being offense.

#### More reasons –

#### 1. Reduced demand, transmission infrastructure saturation, EIA projections

SF Gate 10/12/12 ("Electric Power Transmission in the US Industry Market Reserach Report Now Available from IBISWorld," Read more: http://www.sfgate.com/business/prweb/article/Electric–Power–Transmission–in–the–US–Industry–3942031.php#ixzz29hR9EKm6)

Electricity consumption slowed during the recession as nearly all downstream customers cut back expenditures. According to Federal Reserve estimates, manufacturers increasingly idled production facilities over the past five years, resulting in lower industrial electricity consumption. According to Yang, “Furthermore, the EIA estimates that households have increasingly adopted energy–efficient appliances, causing overall household consumption to slightly decrease.” And in the commercial sector, many operations closed, dragging down demand for power. In addition, electricity price growth has also slowed as transmission infrastructure became increasingly saturated over the past five years. Market saturation often occurs because PUCs generally grant higher rate increases to utilities that invest in transmission infrastructure. The EIA expects both electricity consumption and electricity prices to fall in 2012. Consequently, IBISWorld estimates that industry revenue will decline 2.4% over the year.

#### 2. Multiple indicators prove

Fahey 10/10/12 (Jonathan, Huff Post, "Heating costs to rise this winter as cold returns," http://www.huffingtonpost.com/huff–wires/20121010/us–winter–heating–costs/)

Prices for natural gas, heating oil and other fuels will be relatively stable. But customers will have to use more energy to keep warm than they did a year ago, according to the annual Winter Fuels Outlook from the Energy Department's Energy Information Administration. Last winter was the warmest on record. This year temperatures are expected to be close to normal. Heating bills will rise 20 percent for heating oil customers, 15 percent for natural gas customers, 13 percent for propane customers and 5 percent for electricity customers, the EIA announced Wednesday. Heating oil customers are expected to pay an average of $3.80 per gallon, the highest price ever. That will result in record heating bills, at an average of $2,494. That's nearly $200 more than the previous high, set in the winter of 2010–2011. Kathleen Ryan of Cohoes, in upstate New York, is on a payment plan in which she is billed for oil November through May to spread out the costs. But with oil prices high and a hint of winter chill in the air, she is concerned. "You have no idea what Mother Nature is going to bring," she said. "They're already talking about frost this weekend. My costs could double." She regrets not switching over to natural gas earlier this year when sewer line work in her neighborhood would have made it easier to run a gas line to her home. But she has a plan to keep a lid on her heating bills. "I'm going to buy a portable heater, an electric heater," she said. That could help. Customers who use natural gas, electricity or propane will see lower bills than in a typical winter because of relatively low prices. For example, natural gas should average $10.32 per thousand cubic feet. That's 0.8 percent higher than last year but 13 percent lower than the five–year average. "It's two different worlds. For most families this is still going to be an affordable year, except for those who use oil heat," says Mark Wolfe, the Executive Director of the National Energy Assistance Director's Association. "For them, it's going to be very difficult." Rising heating oil costs come at a time when funding for low–income heating assistance is falling. Over the last two years, federal heating assistance funding has been cut to $3.5 billion from $5.1 billion. The number of households receiving assistance has dropped by 1.1 million over the period, according to Wolfe. Just 6 percent of the nation's households use heating oil, but they tend to be in some of the coldest parts of the country where heating needs are high, mainly in the Northeast. About half use natural gas for heat and 38 percent use electricity. Five percent of households use propane and 2 percent use wood. Electricity prices will fall 2.3 percent to 11.4 cents per kilowatt hour, the government estimates. Propane prices will fall 8 percent in the Midwest to $2.02 per gallon and 13 percent in the Northeast to $2.95 per gallon. Natural gas, propane and electricity prices are relatively low because of a dramatic increase in domestic natural gas production over the last five years. Natural gas is used to generate about one–third of the nation's electricity and is instrumental in setting the price of electricity. Recently drillers have been increasing production of so–called natural gas liquids, including propane.

### Prices Low

#### Electricity prices are low and stable now.

Macdonald 13 (Gregor, has written for the Financial Times of London and The Harvard Business Review, 2/7, http://oilprice.com/Energy/Energy-General/The-Next-Industrial-Revolution-will-be-Led-by-Robots.html)

Instead, Man Who Fell to Earth (MWFE) needs to think about shipping costs and energy input costs, because robots run on electricity. As it turns out, the United States has some of the cheapest electricity rates in the OECD. Average U.S. rates are just below 10 cents per KWh, and are stable as well. Even better, industrial and commercial rates are even lower. From the most recent data, via EIA Washington:¶ Robots need no healthcare and incur no payroll taxes. Indeed, as machines, they would be conveniently depreciated like other capital equipment.¶ Owing to U.S. hydropower and our cheap natural gas-fired powergrid, it's no longer clear that a factory making stoves, refrigerators, and cooking equipment with robots would be any cheaper in Asia. Indeed, current data suggests the price of electricity in China is roughly around 7.5 cents (or higher) per KWh.

#### Electricity prices low now.

The Financial 13 (1/15, http://www.finchannel.com/news\_flash/Oil\_%26\_Auto/121947\_2012\_Brief%3A\_Average\_wholesale\_electricity\_prices\_down\_compared\_to\_last\_year/)

Average, on-peak (weekdays from 7:00 a.m. to 11:00 p.m.) day-ahead electricity prices were lower across the entire United States in 2012 compared to 2011.¶ In wholesale electric regions where prices declined in both 2011 and 2012, the drops in 2012 were generally larger. Lower natural gas prices in 2012 and generally mild temperatures contributed to the 2012 declines in on-peak power prices. The large decline in average spot prices in the Electric Reliability Council of Texas (ERCOT) region was principally because of a return to more typical pricing in 2012 compared to the significant price spike in the summer of 2011.¶ Off-peak (nights and weekends) wholesale electricity prices were also generally lower in 2012 than in 2011, although the decreases were much less dramatic than in on-peak prices. As EIA said, the only regional increases in off-peak prices that occurred between 2011 and 2012 were in California, where the extended outage of the San Onofre Nuclear Generating Station affected the wholesale power supply in that region. Nuclear units typically serve as baseload capacity, running throughout the day and night. The slightly higher off-peak prices reflect the cost of replacing the less-expensive generation from nuclear units.

### A2: Shale Unsustainable

#### 20 years of shale gas – best estimates – no need for the plan

Berman 12 (Art, Former Editor – Oil and Gas Journal, Geological Consultant – American Association of Petroleum Geologists, “After the Gold Rush: A Perspective on Future U.S. Natural Gas Supply and Price,” Oil Drum, 2-8-12, http://www.theoildrum.com/node/8914)

The Potential Gas Committee (PGC) is the standard for resource assessments because of the objectivity and credentials of its members, and its long and reliable history. In its biennial report released in April 2011, three categories of technically recoverable resources are identified: probable, possible and speculative. The President and many others have taken the PGC total of all three categories (2,170 trillion cubic feet (Tcf) of gas) and divided by 2010 annual consumption of 24 Tcf. This results in 90 and not 100 years of gas. Much of this total resource is in accumulations too small to be produced at any price, is inaccessible to drilling, or is too deep to recover economically. More relevant is the Committee’s probable mean resources value of 550 (Tcf) of gas (Exhibit 4). If half of this supply becomes a reserve (225 Tcf), the U.S. has approximately 11.5 years of potential future gas supply at present consumption rates. When proved reserves of 273 Tcf are included, there is an additional 11.5 years of supply for a total of almost 23 years. It is worth noting that proved reserves include proved undeveloped reserves which may or may not be produced depending on economics, so even 23 years of supply is tenuous. If consumption increases, this supply will be exhausted in less than 23 years. Revisions to this estimate will be made and there probably is more than 23 years but based on current information, 100 years of gas is not justified.