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## plan

#### The United States Federal Government should reduce greenhouse gas new source performance standards for coal fired energy generation units, clarifying that the Environmental Protection Agency lacks the authority to implement these standards under the Clean Air Act.

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#### GHG NSPS rule prohibits new coal production—kills the industry

Peter Glaser, Troutman Sanders, LLP, 5/31/12, ADMINISTRATION ENERGY POLICIES, Congressional Testimony, Lexis

EPA's proposed GHG NSPS would also kill new coal-fueled units. The rule sets a performance level for new coal units equivalent to what EPA says a combined cycle natural gas combustion turbine can meet - 1000 lbs. CO2/MWh. Yet EPA recognizes that even a modern, efficient supercritical coal plant can only meet a standard of 1800 lbs. CO2/MWh. EPA says that a coal plant with carbon capture and storage (CCS) could meet the 1000-lb. standard, but it also recognizes that CCS technology is not commercially competitive. It cites to Department of Energy/National Energy Technology Laboratory "estimates that using today's commercially available CCS technologies would add around 80 percent to the cost of electricity for a new pulverized coal (PC) plant." CCS is a technology that holds promise, but it has not been demonstrated to be commercially available at scale. As important, the basic legal and regulatory architecture is not in place to make CCS a reality. There is no comprehensive permitting system for storing CO2 underground for the very long time periods required, nor is there a liability structure in place to cover potential liabilities over this long term. A July 22, 2009 paper prepared for the American Public Power Association entitled Geologic CO2 Sequestration, Issue Spotting and Analysis White Paper, details the numerous legal and regulatory impediments that must be resolved before CCS can become a commercial reality. Nearly three years later, these impediments remain unresolved. As the Administration's CCS task force explains:

In addition to the challenges associated with cost, these projects will need to meet regulatory requirements that are currently under development. Long-standing regulatory programs are being adapted to meet the circumstances of CCS, but limited experience and institutional capacity at the Federal and State level may hinder implementation of CCS-specific requirements. Key legal issues, such as long-term liability and property rights, also need resolution.

August 2010, at 2. Hence, for EPA to say that new coal generation can be built if it uses CCS is no different than EPA saying that no new coal plants can be built for the foreseeable future. EPA states in the proposed GHG NSPS rule that the rule will incent CCS and that CCS costs will come down over time as more units are built, but the opposite is the case. It may be true in general that the cost of the first unit in a new industry is high, while the cost of the thousandth unit is lower, but that maxim won't apply in an industry where no one is allowed to build coal plants. There will be no way to get from the first unit to the thousandth unit. EPA also states that new coal plants installing CCS can average their emissions over 30 years to meet the 1000- lb. standard. EPA states that a new unit meeting an 1800-lb. standard in the first ten years of operation will be deemed to meet the standard over 30 years if it eventually installs CCS and its 30-year average emission are 1000 lbs. But this proposal is just a mirage. No unit can get financed if it will violate EPA standards in 10 years unless it installs technology that, at best, is only projected to be available in 10 years. Lending institutions putting more than a billion dollars at risk will require considerably more certainty than the possibility that the unit will avoid violating regulatory standards if in 10 years CCS technology proves to be ready both commercially and as matter of law and regulation.

#### Crushes electricity reliability—causes cascading blackouts

Scott Segal, Electricity Reliability Coordinating Council Director, 6/25/12, ERCC Comments Submitted to EPA on the New Source Performance Standards for Power Plant Carbon Emissions, www.electricreliability.org/ercc-comments-submitted-epa-new-source-performance-standards-power-plant-carbon-emissions

Given the regulatory uncertainty related to future EPA regulations on a wide variety of energy sources—and not just coal—keeping all options on the table for energy generation, as the President has suggested multiple times, is essential to maintaining America’s energy supply.

In recent years, coal-fired power plants have provided 40 to 50 percent of the electricity used by US consumers and businesses each year. The number is lower now due to pending EPA regulations and market conditions associated with the price of natural gas, but even today, notwithstanding the historically low cost of natural gas and newly adopted regulatory obstacles for coal, several power producers in the U.S. are seeking to develop new state-of-the-art coal-fired power plants for a variety of reasons. Some of them are concerned about the historic volatility in natural gas prices and their inability to obtain long-term contracts with stable pricing for natural gas, preferring the long-term price stability that comes with coal. Some of them are developing new plants in areas that have localized, economical supplies of coal or other solid fuel. Others simply do not want to put all their eggs in one basket and want to maintain fuel diversity in their generation mix. Despite EPA’s recognition that the CAA requires the agency to consider “energy requirements” in connection with proposed standards of performance, the proposed rule does not even consider these important energy policy issues.[13] As aging coal-fired power plants are forced to shut down due to other EPA air pollution regulations and additional plants are temporarily idled to install mandated pollution controls, we need to ensure a reliable stream of electrical power is available to meet the nation’s energy needs.

As a result of the combination of EPA’s regulations, including the proposed rule and the inevitable 111(d) rule for existing coal-fired units, the country may experience a shortage of electricity, and the reliability of our electricity grid will face substantial risks. The loss of future coal-fired generation, investment in current coal-fired generation, and closures of existing coal-fired generation capacity that may result from the combination of the proposed rule and other EPA regulatory actions risks a variety of reliability problems. In most cases, coal-fired plants cannot be replaced overnight by natural gas plants, as the time it takes to install pipeline and other infrastructure necessary even to begin conversion of an old plant or construction of a new one is considerable. Additionally, as NARUC Chair David Wright testified recently, coal-fired generation is an important aspect of “resource diversity,” and EPA needs to “recognize the needs of States and regions to deploy a diverse portfolio of cost-effective supply-side and demand-side resources based on their own unique circumstances and characteristics.”[14] ERCC is concerned that the proposed rule establishes a future for electricity generation that is narrowly prescribed to a small group of technologies, some of which do not even exist commercially at this time, and that EPA’s plan for the future risks disruption in the reliable supply of electricity.

EPA needs to carefully consider the consequences of polices that may not allow for a flexible and reliable supply of electricity, because the impacts of reliability problems can be devastating. The downside impacts of reduced electric reliability are substantial and must be taken into account in any responsible analysis of the proposed rule. As ISO New England has stated:

A reliable supply of electricity is a foundation of our prosperity and quality of life. Without it, our world literally grinds to a halt—businesses cannot plan and operate productively, hospitals and schools cannot provide their essential services, and residents cannot depend on the electricity they need simply to live their daily lives. Without reliable electricity, the financial and societal costs would be enormous.[15]

The Institute of Electrical and Electronics Engineers of the U.S. (IEE-USA) has further observed that even minor occurrences in the electric power grid can sometimes lead to catastrophic ‘cascading’ blackouts, and that the loss of a single generator can result in an imbalance between load and generation. The resulting blackouts cause incalculable economic damage. For example, the direct costs to high-technology manufacturing in the San Francisco Bay Area alone during the California blackouts alone ran as high as one million dollars a minute due to lost production, and the relatively brief Northeast blackout of 2003 cost business about $13 billion in lost productivity.[16] These are costs that the our economy and communities cannot afford to bear, and EPA needs to carefully consider reliability concerns before moving forward with the proposed rule.

#### Grid impact d is wrong—cascading blackouts likely

Peter Glaser, Troutman Sanders, LLP, 5/31/12, ADMINISTRATION ENERGY POLICIES, Congressional Testimony, Lexis

Impacts of the EPA Rules on the Reliability of the Electric Grid

The wave of retirements caused by EPA's rules - combined with the fact that most coalfueled units that are not retiring must be temporarily pulled from service in the next 2-3 years to install extensive pollution control equipment - threatens to undermine the reliability of the electric grid and to increase electric rates to consumers. The North American Electric Reliability Corporation (NERC), in its most recent long-term assessment of grid reliability, termed EPA regulation the number one risk to reliability. According to NERC, 1350 electric generating units at 525 stations will be required by these rules either to install controls or retire in the next several years.

This risk is being experienced across the gird, and the issue is not just whether the lights will stay on but how much it will cost to keep the lights on. Both the Electric Reliability Corporation of Texas (ERCOT), which is responsible for grid operations in most of Texas, and the Southwest Power Pool, which is responsible for grid operations in all or parts of 8 southwestern states, concluded that CSAPR threatens the ability of those organizations to keep the lights on. According to an SPP September 9, 2011 letter to EPA on CSAPR, there will be "negative implications to the reliable operation of the electric grid in the SPP region raising the possibility of rolling blackouts or cascading outages that would likely have significant impacts on human health, public safety and commercial activity." (Emphasis supplied.)

The Midwest Independent System Operator (MISO), which is responsible for interstate grid operations in a region consisting of all or parts of 11 U.S. states and the Canadian province of Manitoba estimates that 61 of 71 GW of baseload coal in the MISO region will require some action to comply with EPA's regulations over the next three years or sooner. Of those 61 GW, 13 GW are at immediate risk of retirement, according to MISO. MISO estimates that it will cost ratepayers $33 billion to retrofit or replace the 61 GW. MISO describes reserve margins as "plummeting." For example, "[r]etirement of 13 GW of coal-fired generation would cause MISO's current projected reserve margin for 2016 to plunge to 8.3 percent - 9.1 percent short of our required 17.4 percent reserve margin."

The problem may be similar in the 13-state (and District of Columbia) PJM region, where, according to PJM, 14 GW of generation have already announced plans to retire between May 2012 and 2015, "enough generation to produce enough power to supply Indiana's needs for a year." To alleviate the reliability problem, PJM recently approved nearly $2 billion to fund the cost of 130 separate electric transmission upgrades during this period. This is an unprecedented number of projects occurring simultaneously in the region, and with transmission development always being controversial and some of these projects requiring new rights-of-way, the prospect that all of these projects will not get built in time is concerning.

The recent PJM capacity auction for 2015-16 may be a harbinger of things to come. Capacity prices for PJM have been significantly increasing in the last several annual auctions, so that capacity payments for electricity delivered in 2015 - the year the UMACT takes effect - would be $137 per megawatt/month for most of PJM as compared to $16 today. This effect is most pronounced in northern Ohio, including Cleveland, which has significant transmission bottlenecks. In this area, capacity prices in the most recent auction skyrocketed to $357. These high capacity prices may occur in other regions to the extent PJM transmission upgrades do not keep up with EPA-forced coal plant retirements, and new bottlenecks emerge.

EPA's response to all of this is to say that any grid reliability problems are local and can be solved. It is true that, as EPA belatedly recognizes, the perhaps the greatest problem its regulations pose to grid reliability is "local" in the sense that many of the retiring units, although they don't run frequently, are needed for local reliability reasons - in order to provide voltage support and black-start capability, and to provide critical additional power to the grid on the hottest days of the year. But calling a problem "local" does not mean it is confined to someone's neighborhood. Last year's blackout in San Diego and other areas of the southwest that affected more than a million people began with the actions of a single utility worker in Yuma, Arizona. The Northeast blackout of 2003 that affected an estimated 10 million people in Ontario and 45 million people in eight U.S. states began with conditions on one utility's system in the same area of northern Ohio where the current bottleneck exists.

Failure to Study and Adequately Address Grid Reliability Problem

Perhaps the most interesting facet of how EPA's regulations will affect the grid is that no one, not EPA, not FERC or anyone else, has attempted to study what the actual impact will be - and therefore what the cost of maintaining grid reliability will be. EPA's assessment of the effect its own rules will have on grid reliability consists of rule-by-rule resource adequacy analyses that examine whether the number of retirements that EPA (under)predicts will cause regional generation to fall below reserve requirements. In conducting that assessment, EPA assumed that power on the grid flows freely within broad regions and between regions. But that assumption is demonstrably wrong, as the grid is subject to bottlenecks that impede the flow of power and local reliability requirements that require local generation or additional transmission.

As the Federal Energy Regulatory Commission (FERC), NERC, regional transmission organizations (RTOs) and Independent System Operators (ISOs), and others have told EPA, the key concern for grid reliability is where retirements occur, as a unit in a particular location that is forced to retire could cause cascading reliability problems even in a region with overall excess power reserves. As FERC Chairman Wellinghoff testified at a September 14, 2011 hearing before the Subcommittee on Energy and Power of the House Energy and Commerce Committee, regional and national resource adequacy studies of the type EPA conducted are "irrelevant" in assessing reliability. (Emphasis added). And as FERC Commissioner Moeller stated in an August 1, 2011 response to Senator Murkowski, referring to issues that relate to localized reliability concerns, "[a]ccording to the information that I received from Commission staff, they have pointed out to EPA that a reliability analysis should explore transmission flows on the grid, reactive power deficiencies related to closures, loss of frequency response, black start capability, local area constraints, and transmission deliverability." Yet this study was never done.

#### Extinction

Marlo Lewis, Senior Fellow Competitive Enterprise Institute, 6/25/2008, House Permanent Select Committee on Intelligence, House Select Committee on Energy Independence and Global Warming, http://cei.org/cei\_files/fm/active/0/Statement%2520of%2520Marlo%2520Lewis.pdf

Notice what they leave out. The report does not consider whether climate change policy could adversely affect the U.S. industrial base, the combat readiness of U.S. armed forces, global food and energy supplies, or international stability. Nor does it advise DOD to assess these risks in future studies.

So let’s consider some of the geopolitical risks global warming policies may create.

“Money,” an old adage declares, “is the sinews of war.” If we learned anything from the Cold War, it is that economic power is the foundation of military power. The Soviet Union imploded because it lacked the economic base to support its military and geopolitical empire. U.S. economic might was critical to winning the Cold War—as it was to winning World War I and World War II.

At the risk of belaboring the obvious, there is always in democratic politics a tradeoff between guns and butter. It is harder in tough economic times than in prosperous times to raise the funds required to recruit, train, and equip the armed forces. It is harder to sustain public support for military interventions abroad when unemployment and malaise are rising on the home front.

So to the extent that climate policies pose a risk to U.S. economic growth, they also pose a risk to U.S. military strength and defense preparedness.

In this light, let’s consider the Lieberman-Warner bill, which would require a 70-percent reduction in U.S. carbon dioxide emissions by 2050. CEI commissioned University of Guelph economist Dr. Ross McKitrick to assess both the economic impacts of the Lieberman-Warner bill and the Energy Information Administration’s analysis of the bill. The EIA estimates that up to 1 million manufacturing jobs could by lost by 2030.8 However, this is likely an underestimate, because the EIA’s reference case assumes rates of population growth, emissions growth, and income growth that are significantly lower than the long-term rates over the past 45 years.9

In his forthcoming paper, Dr. McKitrick explains that a society’s total emissions are a product of three factors: population, per capita GDP, and the carbon intensity of production. To reduce aggregate emissions, it is necessary to reduce one or more of those three factors. And there’s the rub.

Population is growing at +1.1 percent per year. There is not much Congress can do about that. Real income is growing at about +2.2 percent per year, and presumably Congress wants that to continue. So to reduce emissions 70 percent by 2050, the other factor— emissions intensity—must decline by the following approximate amounts:

• 4.4% per year on average between 2006 and 2012

• 5.2% per year on average between 2006 and 2030

• 6.2% per year on average between 2006 and 2050

Dr. McKitrick comments: “There is no historical precedent for such rapid reductions in carbon dioxide intensity.” Indeed, the historic rate of emissions intensity decline over the past 45 years is 1.6 percent per year.

If these somewhat miraculous reductions in carbon intensity do not occur, then the only way to reach the 70-percent emission reduction target will be through big increases in energy prices leading to big declines in economic growth. This is a recipe for stagflation and worse.

In another paper CEI has commissioned, Dr. McKitrick shows what happens to per capita GDP under several climate bills if population growth and emission intensity decline continue at their historic rates.

Instead of per capita GDP more than doubling between 2005 and 2060, it falls by half or more. The American dream becomes the American nightmare.

Does it have to happen that way? No. Technology breakthroughs that dramatically lower the cost of cutting emissions may occur. But it is in the nature of breakthroughs that they are difficult to plan or even predict. Thus, under these emission reduction mandates, there is a significant risk of severe economic damage.

So again let me state the obvious: An economically weakened America would be less able to sustain its defense commitments, keep the peace, and remain vigorously engaged in the world.

The top agenda item of many global warming activists today is stopping the construction of new coal-fired power plants. No new coal power plants should be built, we are told, unless they are equipped with carbon capture and sequestration. But it could take a decade to determine whether carbon capture and storage is economical under a range of emission reduction scenarios, years to develop the regulatory framework for a carbon capture system, years to overcome NIMBY opposition, and a decade to build the infrastructure on an industrial scale.10

In the meantime, U.S. electricity demand is growing, and coal is the fuel of choice in many markets. The EIA forecasts that between 2007 and 2030, coal will provide 67 percent of all new electric generation in the United States, and new coal generation will constitute 15 percent of all U.S. electric power in 2030.11

Moratoria that effectively ban new coal-based power could create a severe supply-demand imbalance. This would not only inflate electricity and natural gas costs (demand for coal would be diverted to natural gas as an electricity fuel), it would also jeopardize electric supply reliability. Indeed, some parts of the country may experience chronic energy crises characterized by repeated power failures and blackouts.

From a national security standpoint, this poses two main risks. One is that America will increasingly resemble a Third World country where nothing works very well. We will lose our international prestige and ability to lead by example. The other risk is that terrorists will view America’s over-stretched, failure-prone electricity grid as a tempting target. They may calculate: If America’s electric supply system is tottering on the edge, why not give it a few helpful shoves?

The anti-coal campaign is, of course, not limited to the United States. Global warming activists seek to ban new coal-fired power plants not only here but also in China, India, and other developing countries. This is essential to their agenda, and for a very simple reason. The emissions from new coal plants here and elsewhere will swamp all of the emission reductions that Europe, Japan, and Canada might, in theory, achieve under the U.N. global warming treaty, the Kyoto Protocol.12 Either the global warming movement kills coal, or coal will bury Kyoto.

The campaign to ban new coal worldwide raises additional national security concerns. First, how would a global moratorium on new coal plants be enforced, and by whom? Presumably this would be accomplished, initially, via trade sanctions. Already European and U.S. leaders are calling for carbon tariffs to penalize goods from countries like China and India that refuse to limit their emissions.13 Warning: Trade wars are not always resolved peacefully! In any event, if the United States vigorously presses for a ban on new coal plants around the world, it will continually butt heads with China, India, and many other developing countries.

We often hear that the world must reduce global emissions 50 percent by 2050 to avert the more dangerous effects of global warming. Those who say this may not realize the kind of sacrifice they are asking developing countries to make. Almost all the growth in emissions over the next few decades is expected to occur in developing countries.

Analysis by the Department of Energy shows that even if the industrialized countries somehow go cold turkey by 2050 and achieve zero net emissions, developing countries would still have to cut their emissions 57 percent below baseline projections to reduce global emissions 50 percent below 2005 levels.

The “energy source” is wood chopped from the forest. The “energy transmission” system is the backs of women and girls, hauling the wood a U.N.-estimated average of 3 miles each day. The “energy use” system is burning the wood in an open fire indoors for heat and light.

These villagers breathe indoor air that is much dirtier than outdoor air in the world’s most polluted cities. Respiratory disease among this large segment of humanity is rampant and kills more than a million people a year, most of them women and children. Reliance on traditional biomass also takes a heavy toll on forests and wildlife habitat.

A coal-fired power plant would improve the lives of those villagers in Kenya in many ways. Women would be freed from backbreaking toil and could pursue more fulfilling activities. People would be healthier because indoor air quality would improve. Refrigeration would make food preparation easier and safer. Electric lighting would allow people to read and study at night. Computers and Internet access would follow. The beautiful forests and the species dependent on them would be saved.

Denying these people—and millions of others like them—access to coal-based power would be a humanitarian disaster. Some might even call it a crime against humanity. Trapping people in energy poverty will very likely make them hungry, desperate, and angry. The potential for conflict within and among countries under a global ban on coal-based power may be quite large.

Schwartz and Randall warn that abrupt climate change would cause food shortages and destabilize governments. Well, during the past six months food riots have broken out in more than 30 countries, and in at least one case—Haiti—rioters brought down the government.15 Big jumps in the price of staples—corn, wheat, and rice—are pushing millions of people below the absolute poverty line.16

Today’s food price inflation has several causes including a weak dollar, high oil prices, drought, and surging demand in India and China. But one factor fueling this crisis is a global warming policy—government subsidies and mandates for corn ethanol production.17 Biofuels provide only about 1.5 percent of total motor fuel liquids, yet they accounted for almost half the increase in global consumption of major food crops in 2006-07, according to the World Bank.18 More aggressive efforts to replace petroleum with biofuels could literally starve the hungry, creating chaos and conflict.

Schwartz and Randall warn that abrupt climate change will create millions of environmental refugees fleeing across borders to escape from hunger and water shortages. Millions of illegal migrants already cross the U.S. southern border from Mexico. Poor Mexicans obtain 40 percent of their daily calories from tortillas, and the U.S. ethanol program, by inflating the price of corn, contributed to a “tortilla crisis” in Mexico.19 Burning food in gas tanks exacerbates the poverty that is a root cause of illegal migration. Expect an increase in ‘biofuel refugees’ as the mandates ramp up.

Schwartz and Randall warn that abrupt climate change, by intensifying winter storms and expanding sea ice, could reduce the availability of gas and oil, leading to conflict over dwindling resources. Well, this implies that non-abrupt climate change, which is far more likely, could make gas and oil more available by opening up the long-sought Northwest Passage.20

More importantly, since Kyoto-style policies aim to restrict access to fossil fuels, they too have the potential to engender conflicts over energy. Cap-and-trade programs force participants to compete over slices of a shrinking pie. That is how cap-and-trade is supposed to work. When it doesn’t work that way—as in phase one of the European Emissions Trading System—it is because companies and/or governments are cheating.21

#### NSPS collapses the economy and competitiveness

Bernard L. Weinstein, Ph.D. associate director of the Maguire Energy Institute and an adjunct professor of business economics in the Cox School of Business at Southern Methodist University in Dallas, September 2011, Proposed EPA Power-Sector Air Rules: Weakening Economic Recovery and Putting America’s Most Competitive Manufacturing Industries at Risk, http://pressdocs.cox.smu.edu/maguire/SMU\_Utility\_MACT\_Report.pdf

The causes of America’s economic malaise are many. In the aftermath of 2007’s financial crisis, credit has remained tight, especially for small and medium-sized businesses. With so many people unemployed or underemployed, consumer spending and retail sales are flat. Home prices continue to fall in many parts of the U.S., eating into home equity which for many households is their primary asset. Construction spending remains about 35 percent below its peak a few years ago due mainly to the drop in home building. And with a glut of foreclosure homes and distress sales on the market, home construction is not likely to rebound for several years. Household wealth has been further eroded by the recent drop in the stock market, and many families have chosen to use what resources they have to reduce their debt burdens rather than increase consumer spending.

Perhaps the only bright spot on the economic horizon of late has been a rise in manufacturing output and employment (see Figure 1). Though still below its 2007 peak, production from America’s factories has risen steadily for the past 18 months. In part, this reflects a modest recovery in the U.S. auto industry, but it is also a result of the growing competitiveness of American manufactured goods in the global marketplace. For example, last year U.S. exports of goods rose 21 percent to $1.28 trillion, the sharpest rise since 1988 (see Figure 2), and accounted for more than half of the economy’s growth. This increase enabled the United States to pass Germany and again become the world’s second-largest exporter, behind China. In addition, rising production costs in Asia coupled with a falling U.S. dollar have induced many American manufacturers to repatriate production that had moved abroad in years past.

The best hope for engendering a sustainable economic recovery is maintaining the growth and competitiveness of America’s industrial sector. Unfortunately, a spate of proposed environmental regulations may derail the renaissance in U.S. manufacturing, especially in industries that are energy-intensive.

II. Affordable and Reliable Electric Power: Critical for Viable U.S. Manufacturing

The federal government’s flagship energy efficiency program, EnergyStar, put the matter succinctly: “Manufacturing operations are among the most energy-intrusive in the U.S. . . . Manufacturers produce heat and operate machinery using a variety of energy types ranging from conventional sourced, such as electricity and natural gas, to non-conventional fuels . . . Energy should be managed with the same expertise as other parts of the business.”1

Should any combination of policies serve to increase electricity price, reduce the reliability of energy sources, and also increase natural gas prices, the clear impact on economic growth in the manufacturing sector will be negative. As Dr. Margo Thorning has testified, “Higher energy prices slow economic growth.” In the case of environmental standards that burden or reduce coal capacity and create the basis for fuel shifting to natural gas or other more expensive fuels, the effect can be profound. Dr. Thorning in modeling the effect of carbon legislation—a policy choice similar on impact to energy-intensive industries—found adverse impacts as high as 1.8 million jobs by 2020 and 4.1 million jobs by 2030.2

The manufacturing sector is acutely sensitive to change in energy cost. Even if the particular manufacturer does not fall within the traditional definition of energy-intensive, the extraction of commodity inputs necessary for manufacturing and the supply and distribution after the point of manufacturing are likely to be energy dependent as well, thus making the most efficient of manufacturers nevertheless dependent on affordable and reliable power.

Beyond input and distribution costs, an escalating price for energy also creates a drag on investment confidence in the manufacturing sector. Observing that manufacturers “use large amounts of electricity made from fossil fuels, especially coal,” Professor Hayden Murray of Indiana University found that, “One of the most significant reasons for lack of investor confidence in the economy is the enormous cost of environmental regulation.”3 Sensitivity to energy costs can directly result in displacement of manufacturing jobs. A report from the International Trade Administration (ITA) of the U.S. Department of Commerce found that “the relative sensitivity between the domestic manufacturing sector to the changes in the price of energy intensive inputs such as electricity could create substantial labor displacement in the U.S. economy.”4

The conclusion drawn from the foregoing analyses is clear: the United States cannot create manufacturing jobs of sufficient quantity and quality to recover from the current economic downturn without maintaining a moderate price and affordable supply of energy.

Thorning found:

higher energy prices will make it harder to restart U.S. economic and jobs growth. Each one percent increase in U.S. GDP growth is accompanied by a 0.3 percent increase in energy use. Therefore, the higher the price of energy, the slower the rate of economic recovery.5

The wider effect on the economy at large is clear. As the manufacturing sector is held in check, so too is the economy at large. As IECA noted, “The U.S. cannot grow the economy without using more volume of [industrial] products. The only question is whether the product will be supplied from domestic sources or imports.”6

III. Projected Cost Impact on Manufacturing of Two New EPA Regulations

Many of America’s most globally competitive industries are energy-intensive. Indeed four industries alone—iron and steel, aluminum, paper and pulp, and chemicals—account for nearly half of the energy consumed by U.S. manufacturing industries and more than 10 percent of total U.S. energy production.7 The preferred energy delivery method for these and most other manufacturing industries is electricity.

As indicated in Figure 3, coal accounts for about 45 percent of America’s electric power generation capacity. Though coal’s share of power generation has decreased somewhat over the past decade, coal-fired electricity is the cheapest to produce and has helped maintain America’s competitive advantages in many energy-intensive manufacturing industries. What’s more, coal is an abundant domestic resource.

The U.S. Environmental Protection Agency (EPA) has proposed two new air quality rules that will result in substantial threats to both employment and competitiveness of U.S. manufacturers. The first is the Cross-State Air Pollution Rule (CSAPR) that would cap key emissions that cross state lines, and the second is the Utility Maximum Achievable Control Technology (Utility MACT) Rule that would set absolute limits on mercury and other chemical emissions. As proposed, the Utility MACT would be the most expensive direct rule in EPA history. Indeed, the EPA itself has estimated it would impose costs of about $11 billion a year on the U.S. economy, though third-party estimates of compliance costs are considerably higher.8 For example, a recent analysis by National Economic Research Associates (NERA) finds that complying with the proposed standards would cost power companies close to $18 billion per year for the next twenty years.9

Some coal-fired plants would be so expensive to retrofit that they would simply be shut down. The NERA study projects that about 48 gigawatts of coal generation would be retired over the next five years, representing a 13 percent decline. New natural gas generators would be the most likely substitutes for these shuttered facilities, and the increased demand for gas is estimated by NERA to push up gas prices by about 17 percent by 2016. Higher prices, in turn, would increase natural gas expenditures by the residential, commercial, and industrial sectors of the economy by $85 billion (present value over 2011-2030 in 2010$) or $8.2 billion per year. Average retail electricity prices would jump by about 12 percent with some parts of the country recording increases as high as 24 percent.

In addition to CSAPR and Utility MACT, EPA has promulgated several other rules with compliance deadlines before 2015 that will affect the utility sector. These include greenhouse gases from new and modified sources, air quality standards for sulphur dioxide and nitrous oxide, and new standards for ash and other residuals from coal combustion. Taken together, these regulations will impact about 400,000 megawatts of oil and coal-fired power generation, almost 40 percent of currently available U.S. capacity. Should all of the proposed implementation deadlines remain unchanged, the reliability of the entire U.S. power grid could be compromised.

The utility industry is already laboring to comply with these and a myriad of other EPA mandates. If the agency sticks to its three year compliance timeline, the result could well be a reduction in reserve margins, making less power available during periods of peak demand or plant outages. Imagine what would have happened in Texas and other southern states that rely heavily on coal-fired generation during the record summer heat wave of 2011 if adequate reserve power had not been available? Not only would many energy-intensive industries have been forced to shut down, but rolling blackouts could have put the public’s health at risk in the face of 100 degree plus temperatures week after week.

This prospect was highlighted in a recent statement by the Electric Reliability Council of Texas, which operates the state grid, to the effect that likely production cuts in 2012 to comply with the CSAPR rules would “threaten the state’s ability to keep the lights on.”10 American Electric Power Company has stated it will retire nearly 6,000 megawatts (MW) of generating capacity in response to the CSAPR rules while Duke Energy will shutter 862 MW and Georgia Power another 871 MW.11

At the same time, by substituting higher-cost electricity (natural gas) for lower-cost electricity (coal), the cost of energy for consumers will invariably rise. Additionally, as a recent report by Bloomberg New Energy Finance has noted, consumers are also likely to bear the increased cost of capacity payments (the cost for utilities to go into the wholesale market and purchase actually available energy) which Bloomberg estimates will also rise rapidly by 2015 as “intermittent resources like wind and solar force [Independent System Operators] to pay to keep gas-peaking plants online even though they’re not used enough to be profitable based on electricity sales.”12 These increased energy costs mean that many energy-intensive industries would see their overall production costs rise while their competitive advantages in the global marketplace decline. At risk are not only tens of thousands of high-paying jobs but a worsening of America’s balance of trade.

There can be little doubt that the suite of rules contemplated by EPA—imposed as they are on U.S. manufacturing interests and not on their foreign competitors—are likely to have profound adverse economic consequences for energy-intensive manufacturing. The consensus of economic literature regarding carbon caps is instructive. McMackin (2009) observed that because, “Energy costs are a substantial portion of these producers’ manufacturing cost,” it is likely that, “production of energy intensive goods may well shift to unregulated countries.”13 The Yudkin/High-Road Strategies report also found that unequal imposition of regulatory burden can send energy-intensive manufacturers overseas. They wrote, “If nothing is done to help these companies, many of them will close or move overseas.”14 ACEEE (2011) describes a “prevalent concern” among energy-intensive manufacturers that environmental standards applied on a national basis “will increase energy costs and potentially compromise the global competitiveness of these energy-intensive and trade-exposed industries.”15 The Nicholas Institute at Duke University (2009) likewise noted that regulations “might provide a comparative advantage” to other less regulated countries, “leading to loss of competitive advantage” and a potential “migration of manufacturing” overseas.16 ITA (2010) speaks to “potential domestic effects and international trade shifts that could be affected by changing energy costs. . . higher energy input costs may cause U.S. production to shift to countries that have not matched” regulation in the United States.17

IV. The Importance of Energy-Intensive Manufacturing to the U.S. Economy

Though manufacturing employment has declined markedly over the past half-century, the industrial sector still accounts for 12 percent of gross domestic product (GDP) and millions of high-wage jobs. It is also the sector that has posted the sharpest productivity gains over the past 40 years. For example, real output per worker in manufacturing was $60,000 in 1970, but by 2010, real output per worker had jumped to $150,000 (see Figure 4).

What’s more, manufacturers typically have strong backward and forward linkages with other sectors of the economy. According to the IMPLAN input-out model, most manufacturing industries reveal very high employment “multipliers,” meaning that one job in manufacturing may support many other jobs across the economy.18

The employment multipliers for “energy-intensive” manufacturers are especially high. For example, a multi-billion dollar refinery or petrochemical plant may only employ several hundred workers on site. However, the inputs to the manufacturing process, along with transportation, distribution and sale of refined products, generate substantial upstream and downstream employment. Indeed, according to IMPLAN, the jobs multiplier for petroleum refineries is 36.3, the highest of any industry in the country. For iron and steel, the multiplier is 12.3 and for pulp and paper it’s 9.7.

The most recent U.S. Census of Manufacturers found that the 10 most energy-intensive manufacturing industries employed almost 1.2 million workers across the U.S.A. (see Table 1). Using a conservative employment multiplier of eight, we can say these 10 industries are supporting at least 9.6 million additional workers across the economy. What this suggests, of course, is that when energy-intensive manufacturing is expanding, the spillover benefits to the rest of the economy are huge.

However, employment multipliers work in both directions. Should America’s manufacturers, and in particular our energy-intensive industries, be forced to reduce capacity and lay off workers in response to externally-imposed energy cost increases such as those that would inevitably attend the rapid implementation of CSAPR and MACT, job losses would be recorded in many other industries as well. Put differently, for every job lost in an energy- intensive manufacturing industry, many more jobs will disappear across the economy.

A study prepared a decade ago on the manufacturing job losses associated with the 1970 and 1977 Clean Air Act Amendments found that in the first 15 years after the Amendments became law (1972-1987), nonattainment counties lost approximately 590,000 jobs, $37 billion in capital stock, and $75 billion (1987$) of production activity.19 And these were just the “direct” losses. Based on a multiplier of eight, up to 4.7 million additional jobs may have been destroyed across the U.S. as a consequence of the 1970 and 1977 Amendments.

The likely job losses from implementation of CSAPR and Utility MACT as proposed would also be significant. While it is not possible to know exactly what job loss or plant closures may result from loss of comparative energy advantage to manufacturing, these estimates derive from BEA employment data, an average multiplier resulting from the IMPLAN input-output model and historical studies like ITA which indicate the potential for “substantial labor displacement” in the event of pricing changes to energy-intensive inputs. Should implementation of the rules result in a 10 percent reduction of employment in America’s 10 most energy-intensive industries listed above, 117,300 on site jobs would disappear. However if we use a conservative employment multiplier of eight, those direct losses would translate into more than one million total job losses across the nation over the next decade.20 And these estimates do not include potential job losses among less energy-intensive manufacturing industries, the coal industry, and electric utilities.21

V. Small Businesses and Consumers Affected by CSAPR and Utility MACT

As mentioned above, the recent NERA study projects higher retail electric prices between 12 and 24 percent by 2016 under the proposed implementation of CSAPR and MACT. Unlike large companies, small businesses and individual households don’t have the market power to negotiate lower rates with utility companies and therefore have to pay full retail for the power they consume. For example, an analysis by the Illinois Power Agency concludes “each power generator will have to decide whether the investment required to meet environmental regulations can be justified based on its projection of market prices and the cost of capital. In any case, those costs will be passed through to consumers.”22

At a time when the economy may be poised for a double-dip recession, with thousands of small businesses and millions of households struggling to pay their bills, higher electricity costs will surely diminish the pace of hiring by small businesses while further eroding the discretionary income of American households. Despite this, based on the analysis it has placed in the regulatory docket, it is entirely unclear whether and to what extent EPA even analyzed and considered the impact of Utility MACT on small businesses—an analysis required of rulemaking agencies under the Regulatory Flexibility Act. As the Small Business Association’s Office of Advocacy noted in its comments on the proposed rule, “EPA has not presented evidence that it has seriously considered the impact this rule will have on small entities or available regulatory alternatives that would minimize that impact . . . EPA has . . . proposed a rule that imposes greater costs on small entities than is necessary under the Clean Air Act.” This prospect does not bode well for an early economic rebound.

VI. A Sensible and Reasonable Path Toward Improved Air Quality

In short, EPA’s CSAPR and Utility MACT rules, when combined with a plethora of other proposed and planned regulations, will retard the prospects for America’s economic recovery and will result in significantly higher costs for America’s slowly recovering manufacturing industries, especially those that require large amounts of energy in their production processes.

Growth in our manufacturing sector, with its strong export orientation, offers the best hope for a sustainable economic recovery. With unemployment stuck at more than nine percent and many Americans too discouraged to even look for a job, it makes little sense to erode the global competitive advantages of our most productive industries. At the same time, the aggressive nature of EPA’s proposals will raise the costs of providing electricity at both the wholesale and retails levels putting additional rate burdens on businesses and households during a time of serious economic stress.

#### Studies prove energy costs are key

Margo Thorning, Ph.D., Senior Vice President and Chief Economist American Council for Capital Formation, 2/9/11, The Impact of EPA Regulation of GHGs under the Clean Air Act on U.S. Investment and Job Growth, http://accf.org/wp-content/uploads/2011/02/House-Energy-Commerce-Testimony-292011-FINAL.pdf

While it is true that a certain number of jobs may be created in some industries that build the energy efficient equipment mandated by regulators, overall, however, the evidence suggests that the total impact on U.S. net job growth will be negative. The main effect of EPA mandating BACT for GHG reduction under the CAA will be to make energy more expensive and to increase production costs (relative to a baseline forecast). Substituting more expensive energy and higher production costs for cheaper energy and lower production costs causes a slow down in productivity growth and economic activity. Historically, each one percent increase in U.S. GDP growth is accompanied by a 0.2 percent increase in energy use; therefore, the higher the price of energy, the slower the rate of economic recovery. As costs rise in energy intensive industries, output tends to fall, there are fewer new jobs created because the total economic “pie” grows more slowly, relative to a baseline forecast.

The initial adverse impact on job growth may be due to delays in getting PSD and Title V permits (which means delays in starting construction). However, in the longer term, the reason that overall job growth is likely to be slower when EPA begins to mandate BACT for GHG reductions is that companies will have to try to pass on the higher costs of the new BACT requirements to their customers and also pass back the additional costs to workers and shareholders in the form of lower wages and smaller returns on equity investments.

The economic impact of EPA regulation of GHG emissions of stationary sources is likely to be more severe than if a market-based approach were employed. Therefore, analyses like the one performed on the Kerry/Lieberman bill can be used to benchmark the harm from EPA’s Clean Air Act GHG program. The results of the ACCF/SBEC macroeconomic analyses on the Kerry/Lieberman bill show that higher energy prices and more costly production methods will make it harder to keep the U.S. economic recovery going and to reduce the unemployment rate (see study at: http://www.accf.org/publications/137/accf-sbe-council-study-on-kerry-lieberman-bill).

Other results of rising costs driven by EPA’s GHG regulations are loses in investment in U.S. production and losses of domestic and export market share by U.S. firms. One of the factors that causes businesses to locate new investment abroad is policies or market-driven events that raise energy costs or other costs of production. This, in turn, leads to a shift in the share of global production from domestic producers to firms located oversees. As a result, “leakage” of both jobs and GHG emissions occurs. Where the “leakage’ is to countries with lax environmental controls and more energy-intensive production methods, the result is a net increase in global GHG emissions. In addition, under EPA’s GHG permitting requirements, there will be no “border tax adjustments” as there are in recent U.S. cap and trade bills to help energy intensive industries adjust to higher production and energy costs.

U.S key to the global economy

**Caploe 9** (David Caploe is CEO of the Singapore-incorporated American Centre for Applied Liberal Arts and Humanities in Asia., “Focus still on America to lead global recovery”, April 7, The Strait Times, lexis)

IN THE aftermath of the G-20 summit, most observers seem to have missed perhaps the most crucial statement of the entire event, made by United States President Barack Obama at his pre-conference meeting with British Prime Minister Gordon Brown: 'The world has become accustomed to the US being a voracious consumer market, the engine that drives a lot of economic growth worldwide,' he said. 'If there is going to be renewed growth, it just can't be the US as the engine.' While superficially sensible, this view is deeply problematic. To begin with, it ignores the fact that the global economy has in fact been 'America-centred' for more than 60 years. Countries - China, Japan, Canada, Brazil, Korea, Mexico and so on - either sell to the US or they sell to countries that sell to the US. This system has generally been advantageous for all concerned. America gained certain historically unprecedented benefits, but the system also enabled participating countries - first in Western Europe and Japan, and later, many in the Third World - to achieve undreamt-of prosperity. At the same time, this deep inter-connection between the US and the rest of the world also explains how the collapse of a relatively small sector of the US economy - 'sub-prime' housing, logarithmically exponentialised by Wall Street's ingenious chicanery - has cascaded into the worst global economic crisis since the Great Depression. To put it simply, Mr Obama doesn't seem to understand that there is no other engine for the world economy - and hasn't been for the last six decades. If the US does not drive global economic growth, growth is not going to happen. Thus, US policies to deal with the current crisis are critical not just domestically, but also to the entire world. Consequently, it is a matter of global concern that the Obama administration seems to be following Japan's 'model' from the 1990s: allowing major banks to avoid declaring massive losses openly and transparently, and so perpetuating 'zombie' banks - technically alive but in reality dead. As analysts like Nobel laureates Joseph Stiglitz and Paul Krugman have pointed out, the administration's unwillingness to confront US banks is the main reason why they are continuing their increasingly inexplicable credit freeze, thus ravaging the American and global economies. Team Obama seems reluctant to acknowledge the extent to which its policies at home are failing not just there but around the world as well. Which raises the question: If the US can't or won't or doesn't want to be the global economic engine, which country will? The obvious answer is China. But that is unrealistic for three reasons. First, China's economic health is more tied to America's than practically any other country in the world. Indeed, the reason China has so many dollars to invest everywhere - whether in US Treasury bonds or in Africa - is precisely that it has structured its own economy to complement America's. The only way China can serve as the engine of the global economy is if the US starts pulling it first. Second, the US-centred system began at a time when its domestic demand far outstripped that of the rest of the world. The fundamental source of its economic power is its ability to act as the global consumer of last resort. China, however, is a poor country, with low per capita income, even though it will soon pass Japan as the world's second largest economy. There are real possibilities for growth in China's domestic demand. But given its structure as an export-oriented economy, it is doubtful if even a successful Chinese stimulus plan can pull the rest of the world along unless and until China can start selling again to the US on a massive scale. Finally, the key 'system' issue for China - or for the European Union - in thinking about becoming the engine of the world economy - is monetary: What are the implications of having your domestic currency become the global reserve currency? This is an extremely complex issue that the US has struggled with, not always successfully, from 1959 to the present. Without going into detail, it can safely be said that though having the US dollar as the world's medium of exchange has given the US some tremendous advantages, it has also created huge problems, both for America and the global economic system. The Chinese leadership is certainly familiar with this history. It will try to avoid the yuan becoming an international medium of exchange until it feels much more confident in its ability to handle the manifold currency problems that the US has grappled with for decades. Given all this, the US will remain the engine of global economic recovery for the foreseeable future, even though other countries must certainly help. This crisis began in the US - and it is going to have to be solved there too.

#### Extinction

Kemp 10

Geoffrey Kemp, Director of Regional Strategic Programs at The Nixon Center, served in the White House under Ronald Reagan, special assistant to the president for national security affairs and senior director for Near East and South Asian affairs on the National Security Council Staff, Former Director, Middle East Arms Control Project at the Carnegie Endowment for International Peace, 2010, The East Moves West: India, China, and Asia’s Growing Presence in the Middle East, p. 233-4

The second scenario, called Mayhem and Chaos, is the opposite of the first scenario; everything that can go wrong does go wrong. The world economic situation weakens rather than strengthens, and India, China, and Japan suffer a major reduction in their growth rates, further weakening the global economy. As a result, energy demand falls and the price of fossil fuels plummets, leading to a financial crisis for the energy-producing states, which are forced to cut back dramatically on expansion programs and social welfare. That in turn leads to political unrest: and nurtures different radical groups, including, but not limited to, Islamic extremists. The internal stability of some countries is challenged, and there are more “failed states.” Most serious is the collapse of the democratic government in Pakistan and its takeover by Muslim extremists, who then take possession of a large number of nuclear weapons. The danger of war between India and Pakistan increases significantly. Iran, always worried about an extremist Pakistan, expands and weaponizes its nuclear program. That further enhances nuclear proliferation in the Middle East, with Saudi Arabia, Turkey, and Egypt joining Israel and Iran as nuclear states. Under these circumstances, the potential for nuclear terrorism increases, and the possibility of a nuclear terrorist attack in either the Western world or in the oil-producing states may lead to a further devastating collapse of the world economic market, with a tsunami-like impact on stability. In this scenario, major disruptions can be expected, with dire consequences for two-thirds of the planet’s population.

#### Competitiveness decline triggers great power wars

Baru 9 (Sanjaya, Visiting Professor at the Lee Kuan Yew School of Public Policy in Singapore Geopolitical Implications of the Current Global Financial Crisis, Strategic Analysis, Volume 33, Issue 2 March 2009 , pages 163 – 168)

The management of the economy, and of the treasury, has been a vital aspect of statecraft from time immemorial. Kautilya’s Arthashastra says, ‘From the strength of the treasury the army is born. …men without wealth do not attain their objectives even after hundreds of trials… Only through wealth can material gains be acquired, as elephants (wild) can be captured only by elephants (tamed)… A state with depleted resources, even if acquired, becomes only a liability.’4 Hence, economic policies and performance do have strategic consequences.5 In the modern era, the idea that strong economic performance is the foundation of power was argued most persuasively by historian Paul Kennedy. ‘Victory (in war),’ Kennedy claimed, ‘has repeatedly gone to the side with more flourishing productive base.’6 Drawing attention to the interrelationships between economic wealth, technological innovation, and the ability of states to efficiently mobilize economic and technological resources for power projection and national defence, Kennedy argued that nations that were able to better combine military and economic strength scored over others. ‘The fact remains,’ Kennedy argued, ‘that all of the major shifts in the world’s military-power balance have followed alterations in the productive balances; and further, that the rising and falling of the various empires and states in the international system has been confirmed by the outcomes of the major Great Power wars, where victory has always gone to the side with the greatest material resources.’7

#### Our theory of economics is true

Edward Alden 2-4, senior fellow at CFR, “Why Manufacturing Really Matters: Gary Pisano and Willy Shih on Innovation”, http://blogs.cfr.org/renewing-america/2013/02/04/why-manufacturing-really-matters-gary-pisano-and-willy-shih-on-innovation/

If there is any consensus in the debate over how to revitalize the American economy, it is over innovation. Innovation, we can all readily concur, is the only way for an advanced economy like the United States – which cannot grow by copying and imitating others – to continue to boost productivity and raise living standards. But understanding why useful innovations occur, and what if anything governments can do to foster them, quickly degenerates into a clash between free market absolutists and industrial policy aficionados.

In their book Producing Prosperity: Why America Needs a Manufacturing Renaissance, Harvard Business School professors Gary Pisano and Willy Shih cut through the confusion. In just 138 pages – a perfect read for the Washington to New York Acela – they offer the most compelling case I have read for why making things matters, even if it will produce very few manufacturing jobs in the future. Pisano is an economist with particular expertise in the biotechnology industry, and Shih is a professor of management practice who spent a career in senior executive positions at IBM, Digital Equipment, Silicon Graphics, and Kodak. I had the pleasure of hosting both at a roundtable meeting at the Council on Foreign Relations in New York on February 1. (We had scheduled the meeting for several months ago but our plans were blown away by Hurricane Sandy.)

They demolish the comforting story that many economists have offered to dismiss concerns over the shrinking role of manufacturing in the U.S. economy. The conventional argument goes like this: it makes more economic sense to locate the actual production of goods in lower-wage countries, while the United States maintains the skilled parts of the supply chain – R&D, branding, marketing, etc. The classic example here is Apple: most of the value of an iPhone or iPad comes from the design, software, branding and retailing, not from the assembly. Therefore, U.S.-headquartered Apple can become the most valuable company in the world even while making virtually nothing in the United States.

But it turns out this model is not very replicable (and may not even work very well for Apple in the longer run). The reason is that new technological innovations often come from what is learned in the manufacturing and development of earlier technologies. It is not enough to have a good idea: Bell Labs invented the photovoltaic (PV) cell, but production has been almost entirely in Asia, where all the key component suppliers are located and the manufacturing knowledge now largely resides.

The loss of manufacturing production can have lasting knock-on effects. Willy Shih, who led the consumer digital business for Kodak in the late 1990s, tells the story of how Kodak missed the digital camera revolution. It was not through ignorance – in fact the company had long been working on digital technologies and produced one of the first consumer digital cameras, in 1994. But Kodak had largely exited the camera business in the 1960s, deciding (quite logically at the time) that the real profits were in film. The camera business moved offshore to Japan. As a result, when Kodak decided to begin making digital cameras in the United States, there was no supplier network; all the critical components were being made in Japan. In 1998, Kodak shut down its digital assembly line in Rochester and moved it to Japan to be closer to suppliers.

One of the compelling things about their analysis is that they do not argue that it always, or even mostly, makes sense for U.S. companies to manufacture in the United States. Only in certain sorts of industries is it critical that research and manufacturing be kept in close proximity. For mature technologies with established production processes – such as desktop computers, consumer electronics, commodity semiconductors – outsourcing is a sensible business strategy. But where production processes are rapidly evolving – advanced semiconductors, biotech drugs, and nanomaterials to name just a few – the loss of production can quickly lead to the loss of any innovative edge. And over time the research capabilities will follow production. Applied Materials, for example, moved its chief technical officer to Asia in 2010 because it made more sense to locate research capabilities closer to the company’s largest customers in China, Taiwan, and South Korea.

Nor do Pisano and Shih promise that manufacturing will again become a big jobs engine for the United States. Companies that are investing in U.S. manufacturing are also investing heavily in automation. Manufacturing will still produce some good jobs, but the compelling reason to retain and attract manufacturing is not for employment, but to retain the production know-how and supplier networks that are the key to future innovation – which will in turn spin off new job opportunities.

#### Coal’s key to cloud computing

PennEnergy, 4/23/12, Cloud computing relying on coal-fired generation, www.pennenergy.com/articles/pennenergy/2012/04/cloud-computing-relying.html

A recent report released by environmental group Greenpeace highlighted that many of the country's largest internet companies, some of those responsible for the emerging shift toward cloud computing, are increasingly relying on coal-fired generation.

Cloud computing has been a growing field in the U.S., both for commercial use and for private consumption, requiring a dramatic increase in energy usage as more and more data centers spring up around the country.

The industry has traditionally been tied to Silicon Valley, the center of the initial digital revolution, where coal-fired power plants play a limited role in power generation. As the industry has grown, however, many companies have moved their data centers steadily eastward where they can be closer to ultimate end users and electricity prices are sometimes lower.

Although the percentage of power coming from coal-fired generation has steadily declined in the East Coast, it still accounts for a substantial proportion. It is important to note that beyond location, technology companies have only marginal control over the source of electricity powering their data centers, which is generally managed on a state level .

#### That’s key to sustain the internet

Mark Mills, senior fellow of the Manhattan Institute, 5/31/11, Opportunity In The Internet's Voracious Energy Appetite: The Cloud Begins with Coal (and fracking), www.forbes.com/sites/markpmills/2011/05/31/opportunity-in-the-internets-voracious-energy-appetite-the-cloud-begins-with-coal-and-fracking/

High-tech products require an astounding 1,000 times more energy per kilogram to manufacture than the materials that dominated the 19th and 20th centuries. Few things are as energy-intensive to produce as the miraculous silicon graphics-processing units and memory chips which are the building blocks of the 21st century ubiquitous video paradigm. It takes a couple of kilowatt-hours to make a tiny square centimeter of silicon device that weighs about four-one-thousandth of a pound. You can make several pounds of steel with that much electricity. And we manufacture silicon devices countable in square miles each year.

Overall, it takes roughly 35 times more energy just to make a pound of smart phone or notebook PC, as it does to make a pound of book. And we keep books, at least those of us that still buy books, for years, even centuries. It takes on the order of 20 times more energy to make the network video hardware (allocated pro-rata) than to manufacture a plastic DVD. Everything takes energy to build. But unlike cars and a lot of other goods which see service for a decade or more, most digital hardware has a useful life averaging three years. So when annualizing energy costs of digital device manufacturing, you amortize over a short time.

And the grand total, the “net net” for the Cloud’s appetite when you count all four aspects of energy associated with digital hardware? Well, certainly much more than the oft-cited fact that ‘only’ two percent of U.S. electricity is used by data centers, since that counts, well, just data centers. Account for the other three factors around and in the Cloud and the total appetite is north of 10 percent of national electricity use. So the U.S. digital economy uses roughly as much electricity the entire country of England, likely more.

For some, this may seem like an environmental problem. For many, it is more of an operational challenge in achieving yet more growth with minimal fiscal, not just environmental, energy-related costs. In a now ten-year-old pioneering study, The Internet Begins With Coal, and a related co-authored Forbes article (Dig More Coal: The PCs Are Coming) I set off a firestorm of environmental protest (and frankly, some puerile commentary). The main problem with past and many current protestations about estimating the digital economy’s energy appetite lies in a myopic focus on data centers, and failure to consider all aspects of the digital infrastructure.

As for the future, doubtless we’ll continue to hear what we’ve heard for years. Technology will make digital stuff more efficient so the energy ‘problem’ will be ameliorated if not conquered. We’ve seen this play before. Radical efficiency gains have occurred; but these efficiency gains are precisely what created, and creates more overall demand. And more efficiency gains are coming.

Intel [NASDAQ: INTC] has announced it will cut energy appetite of microprocessors almost three-fold. Data storage is practically free and getting cheaper in both energy and dollar terms per byte – consider what it costs for a 10 GB memory stick today compared to a few years ago, or terabytes of back-up at Carbonite. Overall data center efficiency has also soared in recent years as “virtualization” algorithms have radically improved the utilization of the thousands of servers under roof.

The technical literature is filled with ideas, designs and materials in power electronics and software with potential to increase energy efficiency in cell towers, data centers and handhelds, some by as much as 30 to 50 percent. A similar trend characterized the emergence of the auto age.

Car engine energy efficiency improved 500 percent pound-for-pound from early years to the late 20th century. Greater efficiency made it possible to make better, more featured, safer, usually heavier and more affordable cars. So rising ownership and utilization lead to 400 percent growth in transportation fuel use since WWII. The flattening of automotive energy growth in the West is a recent phenomenon as we finally see near saturation levels in road-trips per year and cars-per-household. We are a long way from saturation on video ‘trips’ on the information highways.

Efficiency gains are precisely what creates and increases overall traffic and energy demand; more so for data than other service or products. From 1950 to 2010, the energy efficiency of information processing improved ten trillion-fold in terms of computations per kWh. So a whole lot more data-like machines got built and used — consequently the total amount of electricity consumed to perform computations increased over 100-fold since the 1950s – if you count just data centers. Count everything we’re talking about here and the energy growth is beyond 300-fold.

Fundamentally, if it were not for more energy-efficient logic processing, storage and transport, there would be no Google or iPhone. At the efficiency of early computing, just one Google data center would consume more electricity than Manhattan. Efficiency was the driving force behind the growth of Internet 1.0 as it will be for the wireless video-centric Internet 2.0. In energy terms, video traffic is the equivalent of migrating all car drivers from Civics to Tahoes. So power use and hardware to produce and manage it will get dragged along for the ride.

Who is playing in these energy fields? Not surprisingly, all the data guys themselves, from Google, as noted, to Microsoft [NASDAQ: MSFT], HP [NYSE: HPQ], Cisco [NASDAQ: CSCO], IBM [NYSE: IBM], Juniper [NYSE: JNPR], Intel – all of them.

Running below the typical excitement radar is a constellation of traditional old-world electric-equipment companies, both large and small, who make all the power electronics components, devices and services that are now the ascendant and often primary costs across the data domain, especially in data centers, commercial enterprises, and manufacturing plants. Familiar names like GE [NYSE: GE], Eaton [NYSE:ETN], Emerson [NYSE: EMR], Siemens [NYSE: SI], ABB [NYSE: ABB], Honeywell [NYSE: HON], Johnson Controls [NYSE: JCI], and Schneider [FR: SU-FR]. Check any of their web sites and you’ll see lots of chest-thumping about powering the digital economy.

There is a grand convergence going on between the old economy’s electrical infrastructure, and the new economy’s digital infrastructure. There is, as well, a symmetrical convergence taking place over in the utility sector’s smart grid – a story for another episode.

Drill down a layer deeper in the ecosystem of engineering players and you find less well-known and often smaller players – in America still, sometimes today’s small is tomorrow’s giant — and a vast landscape of public and private companies, to name a very few to illustrate the diversity; Celestica [NYSE: CLS], , Quest, Intergy and Raritan. Add to the list of emerging players many start-ups and small companies like Power Analytics which (where, full disclosure, I am a board member and we are investors) has pioneered enterprise-level software to visualize and predict the complexities of data center power to marry the oppositional forces of reliability and efficiency.

Drill down further into the basic component layer and we find lots of device and component companies. Of particular interest are those developing next-generation power semiconductors – notably those using silicon carbide, and gallium nitride rather than silicon – which will enable smart power networks the way microprocessors enabled smart communications networks. Our old friends at Cree [NASDAQ: CREE], better known for making LEDs, are one of the power-semi leaders with recent silicon-carbide device releases.

Another bubble brewing on the energy-tech front? You bet. But anchored in the reality of the physics of information, not perceptions of consumer proclivities. Certainly the growth of Facebook, Twitter, LinkedIn, Netlix, and Vevo, and many similar emerging is the face of growth and even froth. You may have trouble knowing where to place bets on the downstream domain, but **the winners upstream are easier to bet on because all Internet companies require underlying infrastructure**.

No surprise then that the pace of data center construction is picking up, from Microsoft’s new 10-football-field-sized Quincy, Washington data center, to Equinix’s recent announcement to build its eighth data center in New York.

One recent survey found up to one-half of data centers need to expand over the next two years, with over two-thirds of data centers expecting to run out of power before the end of next year. The same survey found virtualization has pretty much wrung-out the maximum from installed hardware. Virtualization has been the biggest single energy relief valve, and it’s largely over. Another survey found that 95 percent of data centers experienced at least one unplanned outage over the past couple of years – power was the central issue two-thirds of the time– with an average cost of over $0.5 million per outage. The energy issue has moved to front-and-center.

Hans Thirring in his 1958 book, Energy For Man, was probably the first person to consider and calculate the total energy cost of information and communications. (A citation to his work appears probably for the first time in nearly 50 years in the book I co-authored, The Bottomless Well.) Thirring was prescient. Only now is the technical community starting to give this issue its just due. Maybe the investment community will follow.

Meanwhile, the coming wireless broadband explosion promises to create a vortex of electricity demand. Lots of companies will prosper bringing new technologies and innovations to the digital energy ecosystem.

Some see the energy appetite of the Cloud as a problem. Others amongst us see it as evidence of a new global tech boom that echoes the arrival of the automotive age. We’re back to the future, where the microprocessor today as an engine of growth may not be new, anymore than the internal combustion engine was new in 1958. It’s just that, once more, all the components, features and forces are aligned for enormous growth. With that growth we will find at the bottom of this particular digital well, the need to dig more coal, frack more shale….

#### Extinction

Eagleman 10

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 http://www.wired.co.uk/magazine/archive/2010/12/start/apocalypse-no]

Many great civilisations have fallen, leaving nothing but cracked ruins and scattered genetics. Usually this results from: natural disasters, resource depletion, economic meltdown, disease, poor information flow and corruption. But we’re luckier than our predecessors because we command a technology that no one else possessed: a rapid communication network that finds its highest expression in the internet. I propose that there are six ways in which the net has vastly reduced the threat of societal collapse. Epidemics can be deflected by telepresence One of our more dire prospects for collapse is an infectious-disease epidemic. Viral and bacterial epidemics precipitated the fall of the Golden Age of Athens, the Roman Empire and most of the empires of the Native Americans. The internet can be our key to survival because the ability to work telepresently can inhibit microbial transmission by reducing human-to-human contact. In the face of an otherwise devastating epidemic, businesses can keep supply chains running with the maximum number of employees working from home. This can reduce host density below the tipping point required for an epidemic. If we are well prepared when an epidemic arrives, we can fluidly shift into a self-quarantined society in which microbes fail due to host scarcity. Whatever the social ills of isolation, they are worse for the microbes than for us. The internet will predict natural disasters We are witnessing the downfall of slow central control in the media: news stories are increasingly becoming user-generated nets of up-to-the-minute information. During the recent California wildfires, locals went to the TV stations to learn whether their neighbourhoods were in danger. But the news stations appeared most concerned with the fate of celebrity mansions, so Californians changed their tack: they uploaded geotagged mobile-phone pictures, updated Facebook statuses and tweeted. The balance tipped: the internet carried news about the fire more quickly and accurately than any news station could. In this grass-roots, decentralised scheme, there were embedded reporters on every block, and the news shockwave kept ahead of the fire. This head start could provide the extra hours that save us. If the Pompeiians had had the internet in 79AD, they could have easily marched 10km to safety, well ahead of the pyroclastic flow from Mount Vesuvius. If the Indian Ocean had the Pacific’s networked tsunami-warning system, South-East Asia would look quite different today. Discoveries are retained and shared Historically, critical information has required constant rediscovery. Collections of learning -- from the library at Alexandria to the entire Minoan civilisation -- have fallen to the bonfires of invaders or the wrecking ball of natural disaster. Knowledge is hard won but easily lost. And information that survives often does not spread. Consider smallpox inoculation: this was under way in India, China and Africa centuries before it made its way to Europe. By the time the idea reached North America, native civilisations who needed it had already collapsed. The net solved the problem. New discoveries catch on immediately; information spreads widely. In this way, societies can optimally ratchet up, using the latest bricks of knowledge in their fortification against risk. Tyranny is mitigated Censorship of ideas was a familiar spectre in the last century, with state-approved news outlets ruling the press, airwaves and copying machines in the USSR, Romania, Cuba, China, Iraq and elsewhere. In many cases, such as Lysenko’s agricultural despotism in the USSR, it directly contributed to the collapse of the nation. Historically, a more successful strategy has been to confront free speech with free speech -- and the internet allows this in a natural way. It democratises the flow of information by offering access to the newspapers of the world, the photographers of every nation, the bloggers of every political stripe. Some posts are full of doctoring and dishonesty whereas others strive for independence and impartiality -- but all are available to us to sift through. Given the attempts by some governments to build firewalls, it’s clear that this benefit of the net requires constant vigilance. Human capital is vastly increased Crowdsourcing brings people together to solve problems. Yet far fewer than one per cent of the world’s population is involved. We need expand human capital. Most of the world not have access to the education afforded a small minority. For every Albert Einstein, Yo-Yo Ma or Barack Obama who has educational opportunities, uncountable others do not. This squandering of talent translates into reduced economic output and a smaller pool of problem solvers. The net opens the gates education to anyone with a computer. A motivated teen anywhere on the planet can walk through the world’s knowledge -- from the webs of Wikipedia to the curriculum of MIT’s OpenCourseWare. The new human capital will serve us well when we confront existential threats we’ve never imagined before. Energy expenditure is reduced Societal collapse can often be understood in terms of an energy budget: when energy spend outweighs energy return, collapse ensues. This has taken the form of deforestation or soil erosion; currently, the worry involves fossil-fuel depletion. The internet addresses the energy problem with a natural ease. Consider the massive energy savings inherent in the shift from paper to electrons -- as seen in the transition from the post to email. Ecommerce reduces the need to drive long distances to purchase products. Delivery trucks are more eco-friendly than individuals driving around, not least because of tight packaging and optimisation algorithms for driving routes. Of course, there are energy costs to the banks of computers that underpin the internet -- but these costs are less than the wood, coal and oil that would be expended for the same quantity of information flow. The tangle of events that triggers societal collapse can be complex, and there are several threats the net does not address. But vast, networked communication can be an antidote to several of the most deadly diseases threatening civilisation. The next time your coworker laments internet addiction, the banality of tweeting or the decline of face-to-face conversation, you may want to suggest that the net may just be the technology that saves us.

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#### US courts should strike down the coal NSPS rule—precedent key to prevent fossil fuel regulatory death and EPA carbon caps

Marlo Lewis, Competitive Enterprise Institute, Energy and Environmental Policy Senior Fellow, 11/14/12, Why You Should Care That Courts Overturn EPA's Carbon Pollution Standard, www.forbes.com/sites/realspin/2012/11/14/why-you-should-care-that-courts-overturn-epas-carbon-pollution-standard/print/

The 2012 elections ensure that President Obama’s “war on coal” will continue for at least two more years. The administration’s preferred M.O. has been for the EPA to “enact” anti-coal policies that Congress would reject if such measures were introduced as legislation and put to a vote. Had Gov. Romney won the presidential race and the GOP gained control of the Senate, affordable energy advocates could now go on offense and pursue a legislative strategy to roll back various EPA global warming regulations, air pollution regulations, and restrictions on mountaintop mining. But Romney lost and Democrats gained two Senate seats.

Consequently, defenders of free-market energy are stuck playing defense and their main weapon now is litigation. This is a hard slog because courts usually defer to agency interpretations of the statutes they administer. But sometimes petitioners win. In August, the U.S. Court of Appeals struck down the EPA’s Cross State Air Pollution Rule (CSAPR), a regulation chiefly targeting coal-fired power plants. The Court found that the CSAPR exceeded the agency’s statutory authority. Similarly, in March, the Court ruled that the EPA exceeded its authority when it revoked a Clean Water Act permit for Arch Coal’s Spruce Mine No. 1 in Logan Country, West Virginia.

A key litigation target in 2013 is EPA’s proposal to establish greenhouse gas (GHG) “new source performance standards” (NSPS) for power plants. This so-called carbon pollution standard is not based on policy-neutral health or scientific criteria. Rather, the EPA contrived the standard so that commercially-viable coal plants cannot meet it. The rule effectively bans investment in new coal generation.

We Can Win This One

Prospects for overturning the rule are good for three main reasons.

(1) Banning new coal electric generation is a policy Congress has not authorized and would reject if proposed in legislation and put to a vote. Once again the EPA is acting beyond its authority.

The proposed “carbon pollution” standard requires new fossil-fuel electric generating units (EGUs) to emit no more than 1,000 lbs of carbon dioxide (CO2) per megawatt hour (MWh). About 95% of all natural gas combined cycle power plants already meet the standard, according to the EPA. No existing coal power plants come close; even the most efficient, on average, emit 1,800 lbs CO2/MWh.

A coal power plant equipped with carbon capture and storage (CCS) technology could meet the standard, but the levelized cost of new coal plants already exceeds that of new natural gas combined cycle plants, and “today’s CCS technologies would add around 80% to the cost of electricity for a new pulverized coal (PC) plant, and around 35% to the cost of electricity for a new advanced gasification-based (IGCC) plant,” the EPA acknowledges.

In short, the EPA has proposed a standard no economical coal plant can meet. Not surprising given President Obama’s longstanding ambition to “bankrupt” anyone who builds a new coal power plant and his vow to find other ways of “skinning the cat” after the 2010 election-day “slaughter” of 29 cap-and-trade Democrats. But the big picture is hard to miss: Congress never signed off on this policy.

The only time Congress even considered imposing GHG performance standards on power plants was during the debate on the Waxman-Markey cap-and-trade bill. Section 216 of Waxman-Markey would have established NSPS requiring new coal power plants to reduce CO2 emissions by 50% during 2009-2020 and by 65% after 2020 – roughly what the EPA is now proposing. Although Waxman-Markey narrowly passed in the House, it became so unpopular as “cap-and-tax” that Senate leaders pulled the plug on companion legislation.

Team Obama is attempting to accomplish through the regulatory backdoor what it could not achieve through the legislative front door. The “carbon pollution” rule is an affront to the separation of powers.

(2) The “carbon pollution” standard is regulation by misdirection – an underhanded ‘bait-and-fuel-switch.’

In Massachusetts v. EPA (April 2007), the Supreme Court held that GHGs are “air pollutants” for regulatory purposes. This spawned years of speculation about whether the EPA would define “best available control technology” (BACT) standards for “major” GHG emitters so stringently that utilities could not obtain pre-construction permits unless they built natural gas power plants instead of new coal power plants.

In March 2011, the EPA published a guidance document assuring stakeholders that BACT for CO2 would not require a permit applicant “to switch to a primary fuel type” different from the fuel type the applicant planned to use for its primary combustion process. The agency specifically disavowed plans to “redefine the source [category]” such that coal boilers are held to the same standard as gas turbines.

The EPA reiterated this assurance in a Q&A document accompanying the guidance. One question asks: “Does this guidance say that fuel switching (coal to natural gas) should be selected as BACT for a power plant?” The EPA gives a one-word response: “No.”

This bears directly on the legal propriety of the “carbon pollution” standard. In general, NSPS are less stringent than BACT. NSPS provide the “floor” or minimum emission control standard for determining an emitter’s BACT requirements. BACT is intended to push individual sources to make deeper emission cuts than the category-wide NSPS requires.

Yet despite the EPA’s assurance that BACT, although tougher than NSPS, would not require fuel switching or redefine coal power plants into the same source category as natural gas power plants, the “carbon pollution” rule does exactly that.

In April 2011, the House passed H.R. 910, the Energy Tax Prevention Act, sponsored by Rep. Fred Upton (R-Mich.), by a vote of 255-172. H.R. 910 would overturn all of the EPA’s GHG regulations except for those the auto and trucking industries had already made investments to comply with. Sen. James Inhofe’s companion bill (S. 482) failed by one vote. In June 2010, Sen. Lisa Murkowski’s (R-Alaska) Congressional Review Act resolution to strip the agency of its Mass v. EPA-awarded power to regulate GHGs failed by four votes. One or both of those measures might have passed had the EPA come clean about its agenda and stated in 2009 it would eventually propose GHG performance standards no affordable coal power plant can meet.

(3) The “carbon pollution” standard is weirdly contorted, flouting basic standards of reasonableness and candor.

Under the Clean Air Act, an emission performance standard is supposed to reflect “the degree of emission limitation achievable through the application of best system of emission reduction” that has been “adequately demonstrated.” The EPA picked 1,000 lbs CO2/MWh as the NSPS for new fossil-fuel EGUs because that is the “degree of emission limitation achievable through natural gas combined cycle generation.”

But natural gas combined cycle is not a system of emission reduction. It is a type of power plant. The EPA is saying with a straight face that natural gas combined cycle is an emission reduction system that has been adequately demonstrated for coal power plants. By that ‘logic,’ zero-carbon nuclear-, hydro-, wind-, or solar-electric generation is an emission reduction system that has been adequately demonstrated for natural gas combined cycle.

A coal power plant could meet the standard by installing CCS, but, as the EPA acknowledges, CCS is too costly to qualify as “adequately demonstrated.” The only practical way for utilities to comply is to build new gas turbines instead of new coal boilers. This is the first time the EPA has defined a performance standard such that one type of facility can comply only by being something other than what it is.

The EPA sets performance standards for specific categories of industrial sources. A coal boiler is different from a gas turbine, and up to now the agency reasonably regulated them as different source categories, under different parts of the Code of Federal Regulations – Subpart Da for coal boilers, Subpart KKKK for gas turbines. The EPA now proposes to regulate coal boilers and gas turbines as a single source category — “fossil-fuel EGUs” — under a new subpart numbered TTTT. But only for CO2! Coal boilers and gas turbines will continue to be regulated as separate source categories for criteria and toxic pollutants under Subparts Da and KKKK.

Why hold coal boilers and gas turbines to different standards for those pollutants? The EPA’s answer: “This is because although coal-fired EGUs have an array of control options for criteria and toxic air pollutants to choose from, those controls generally do not reduce their criteria and air toxic emissions to the level of conventional emissions from natural gas-fired EGUs.”

The same reasoning argues even more strongly against imposing a single GHG standard on coal boilers and natural gas turbines. Coal boilers do not have an “array of control options” for CO2 emissions, and have no “adequately demonstrated” option for reducing CO2 emissions to the level of gas-fired EGUs. Subpart TTTT is an administrative contortion concocted to kill the future of coal generation.

Why Care Even If You Don’t Mine or Combust Coal for a Living

At this point you may be wondering why anyone outside the coal industry should care about this cockamamie rule. There are several reasons.

First and most obviously, banning new coal generation could increase electric rates and make prices more volatile. For generations, coal has supplied half or more of U.S. electricity, and still provides the single largest share. The “carbon pollution” standard is risky because coal’s chief competitor, natural gas, has a history of price volatility and a future clouded by the environmental movement’s hostility to hydraulic fracturing, the technology transforming gas from a costly shrinking resource to an affordable expanding resource.

The “carbon pollution” standard itself could put the kibosh on new gas-fired generation if the EPA concludes, as MIT researchers contend, that fugitive methane emissions from hydraulic fracturing make gas as carbon-intensive as coal.

The EPA is also developing GHG performance standards for refineries. “Unconventional” oil production from shale and oil sands is booming in North America, creating thousands of jobs, generating billions of dollars in tax revenues, and reducing U.S. dependence on OPEC oil. But unconventional oil production is energy-intensive and therefore carbon-intensive. It is unknown whether or how the forthcoming GHG standard for refineries will address the carbon intensity of unconventional oil. What we do know is that the environmental groups who litigated the EPA into proposing these standards are arch foes of unconventional oil.

In any event, the “carbon pollution” standard for power plants is just the start of a regulatory trajectory, not its end point. The EPA’s settlement agreement with environmental groups and state attorneys general obligates the agency to extend the standard to “modified” coal power plants and establish emission “guidelines” for non-modified units.

Moreover, the standard sets a precedent for promulgating NSPS for other GHG source categories – including natural gas. As indicated above, if gas can set the standard for coal, then wind and solar can set the standard for gas, and the refinery standard could undermine the profitability of unconventional oil. Although initially directed against new coal, the standard puts all fossil-energy production in an ever-tightening regulatory noose.

Pandora’s NAAQS

Taking a longer view, the “carbon pollution” rule moves the U.S. economy one step closer to the ultimate environmental policy disaster: national ambient air quality standards (NAAQS) for GHGs.

In December 2009, the EPA issued a rule under Section 202 of the Clean Air Act declaring that GHG emissions from new motor vehicles endanger public health and welfare. The endangerment rule was both prerequisite and trigger for the agency’s adoption, in January 2011, of first-ever GHG motor vehicle standards. The agency now claims that it need not issue a new and separate endangerment finding under Section 211 to adopt first-ever GHG performance standards for power plants, because subsequent science confirms and strengthens its Section 202 finding.

An implication of this argument is that the EPA need not make a new endangerment finding to promulgate NAAQS for GHGs under Section 108, because the Section 202 finding would suffice for that as well.

Section 108 of the Clean Air Act requires the EPA to initiate a NAAQS rulemaking for “air pollution” from “numerous or diverse mobile or stationary sources” if such pollution “may reasonably be anticipated to endanger public health and welfare.” Carbon dioxide obviously comes from numerous and diverse mobile and stationary sources, and the EPA has already determined that the associated “air pollution” – the “elevated concentrations” of GHGs in the atmosphere – endangers public health and welfare. Logically, the EPA must establish NAAQS for GHGs set below current atmospheric concentrations.

Eco-litigants have already put this ball in play. The Center for Biological Diversity and 350.Org petitioned the EPA more than two years ago to establish NAAQS for CO2 at 350 parts per million (roughly 40 parts per million below current concentrations) and for other GHGs at pre-industrial levels.

The potential for mischief is hard to exaggerate. Not even a worldwide depression that permanently lowers global economic output and emissions to, say, 1970 levels, would stop CO2 concentrations from rising over the remainder of the century. Yet the Clean Air Act requires States to adopt implementation plans adequate to attain primary (health-based) NAAQS within five or at most 10 years. A CO2 NAAQS set at 350 parts per million would require a level of economic sacrifice vastly exceeding anything contemplated by the Waxman-Markey cap-and-trade bill or the Copenhagen climate treaty, which aimed to stabilize CO2-equivalent emissions at 450 parts per million by 2050.

The EPA has yet to decide on the CBD-350.Org petition. Perhaps this is another case of punting unpopular regulatory decisions until Obama’s second term. The one instance where the administration addressed the issue is not reassuring. In a brief submitted to the Supreme Court in American Electric Power v. Connecticut, the Obama Justice Department described Section 108 as one of the provisions making the Clean Air Act a “comprehensive regulatory framework” for climate change policy.

Ultimately, only the people’s representatives can protect coal generation, hydraulic fracturing, and unconventional oil from hostile regulation. But nixing the “carbon pollution” standard would be a big setback to both the EPA and the eco-litigation fraternity, and would help safeguard America’s energy options until a future Congress reins in the agency.

#### Coal NSPS establishes a precedent that leads to broader GHG regulation—destroys range of industries

Chamber of Commerce et al, 6/25/12, Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, Docket ID No. EPA –HQ–OAR–2011–0660; FRL– 9654–7, 77 Fed. Reg. 22,392 (April 13, 2012), The National Association of Manufacturers, the American Chemistry Council, American Forest & Paper Association, American Fuel & Petrochemical Manufacturers, American Iron and Steel Institute, American Petroleum Institute, American Wood Council, Brick Industry Association, Corn Refiners Association, Council of Industrial Boiler Owners, National Oilseed Processors Association, Portland Cement Association, The Fertilizer Institute, and the U.S. Chamber of Commerce, http://www.nam.org/~/media/53E86E050C7A495A9CC84F9778BA1F10/Association\_GHG\_NSPS\_Comments\_June\_25\_2012.pdf

The Associations represent the nation’s leading manufacturing sectors which form the backbone of the nation’s industrial ability to grow our economy and provide jobs in an environmentally sustainable and energy efficient manner. Although the EPA’s proposed New Source Performance Standard (“NSPS”) addresses specifically the utility sector, we collectively have significant concerns regarding the EPA’s first-ever regulation of greenhouse gas (“GHG”) emissions from a source category under Section 111, both because of the impact these regulations will have on energy prices and reliability, as well as the potential precedent-setting nature of the approach on manufacturing sectors in the future. It is also possible that the proposed rule may directly apply to future projects of the Associations’ members, including, for example, cogeneration plants owned, operated, or co-located at their facilities. The Associations are key stakeholders on any regulation that impacts energy and which may impact manufacturers directly in the future. For the reasons described below, we urge the EPA to withdraw this proposal given the already significant adverse consequences of the proposal on industry, and to engage instead—if at all—in a process with all interested stakeholders as to whether and how the EPA should approach GHG regulation through NSPS before proposing rules that have an immediate and harmful impact.

As discussed below, the EPA’s NSPS proposal is unprecedented not only in its policy reach, but in the significant number of compounding errors that exceed the EPA’s authority under the Clean Air Act. At the outset, we have an overarching concern that the NSPS proposal crosses a line by expanding the EPA’s 40-year mandate as the preeminent regulator of the environment to become a regulator of energy. In this environmental regulation the EPA is controlling not merely the emissions of air pollutants, but the choice of fuel and energy that a project must utilize if it is to be constructed or operated. The EPA’s approach to force one type of fuel to be switched for another arises out of the proposal’s effort to combine two independent and distinct source categories and regulate them together under a single standard of performance that simply cannot be attained by one of the source categories. In doing so, the EPA is effectively dictating both fuel choice and design choice for new electric utility generating units (“EGUs”), contrary to Congressional intent and the EPA’s authority as a regulator of the environment, not energy. This action will have far-reaching effects, not only for the EGUs themselves, but also for the many other industries that depend upon the energy that they provide and may one day become subject to the same types of regulations.

#### GHG regs on the semiconductor industry kills competitiveness

SIA, SEMICONDUCTOR INDUSTRY ASSOCIATION, 1/31/11, SEMICONDUCTOR INDUSTRY ASSOCIATION PETITION FOR RECONSIDERATION AND REQUEST FOR STAY PENDING RECONSIDERATION OF SUBPART I OF THE FINAL RULE FOR MANDATORY REPORTING OF GREENHOUSE GASES, http://op.bna.com/env.nsf/id/fwhe-8z4l8q/$File/sia.petition.pdf

Individual recipes are among the most closely-guarded trade secrets in the semiconductor industry,36 and several courts have acknowledged that semiconductor chip manufacturing processes and design are protectable as trade secrets.37 To remain globally competitive, a semiconductor company must innovate on a constant basis to bring new and faster products to market. Accordingly, semiconductor manufacturers invest considerable time and money in research and development to perfect the recipes used in the fabrication process. Each company’s recipe portfolio has an inherent intellectual property value in the hundreds of millions to billions of dollars. Final Subpart I, although it does not mandate the submission of any full recipe, does require reporting of certain recipe-specific information. As explained below, this information could provide enough specific knowledge of proprietary device designs and manufacturing processes to allow for reverse engineering of individual recipes and otherwise would compromise the trade secrets within a company’s recipe portfolio.38 In particular, Section 98.96 of the Final Subpart I requires facilities to report the following information:  Type of each gas used for each set of similar recipes;39  Recipe-specific utilization and byproduct rates (i.e., emission factors);40  The film or substrate that was etched or cleaned and the feature type that was etched for each recipe in Part 98.96(f)(1);41  Quantity of each gas used for each set of “similar” recipes, to be reported on an annualized basis;42  All apportioning factors used to apportion F-gas and N2O consumption;43 and Identification of the quantifiable metric used in a facility-specific engineering model to apportion gas consumption.44 The level of intellectual property inherent in the foregoing information is significant. Essentially, SIA understands these reporting requirements to require that a company reveal the quantity of gas being used (1) for each type of “film” being etched (e.g., oxide, nitride) and (2) for each “feature” within that film (e.g., gate, deep trench).45 As result, a company wouldberevealinginformation about its process and particular recipes used in that process which it, in many cases, has never shared publicly and which it regards as intellectual property. For example, a company would need, under these information requirements, to reveal that in its 300 millimeter fabrication process, for a specific group of “similar” recipes it uses X kg of SF6 and Y kg of CHF3 to etch silicon nitride layers in gate stack in year 2010. In addition, Final Subpart I would require each facility to maintain recipe- specific records in order to document compliance with the requirements of the Rule and make such records available to EPA. In particular, Section 98.97(b) of the Rule requires the following records be kept by any facility that estimates emissions using recipe-specific emission factors, i.e., “large” facilities: ￼43 44 45 46 (1) “Complete documentation and final report for measurements for recipe specific [emission factors]”; and (2) “Documentation that recipe-specific [emission factors] developed for your facility are measured for recipes that are similar to those used at your facility, as defined in § 98.98. The documentation must include, at a minimum, recorded to the appropriate number of significant figures, reactor pressure, flow rates, chemical composition, applied RF power, direct current (DC) bias, temperature, flow stabilization time, and duration.”46 Of particular concern to SIA and its members is that these records could become subject to inquiries as to their content and sufficiency not only by EPA in an enforcement context, but also by local residents and other private citizens in future permitting and related contexts (e.g., a Freedom of Information Act Request or through discovery in a citizen suit filed under the Clean Air Act).47 Etch recipes are considered trade secrets and, as such, are tightly controlled. Most semiconductor companies – even very prolific patentees – opt to protect their recipes as trade secrets, rather than through patents, which require disclosure of the recipe. If these records are made public, they could loose their status as trade secrets, allowing competitors to reverse engineer recipes, thereby compromising the value of information worth up to several billion dollars to each company. The loss of trade secret protection for semiconductor etch recipe information through its public disclosure via the Final Rule could amount to a regulatorytakingofintellectualproperty.48 ItdoesnotappearthatEPA(orthe Office of Management and Budget) has undertaken any analysis of this potential erosion of private intellectual property value. In addition to this potential takings issue, disclosure of recipe information may also present national security concerns at those semiconductor facilities that are designated Trusted Foundries by the U.S. National Security Agency.49 Moreover, EPA has not yet finalized its position on what information submitted under the Reporting Rule constitutes “emissions data” that are not subject to confidential treatment under the CAA. Section 114(c) of the Clean Air Act provides that “records, reports or information” submitted to EPA in connection with a rulemaking or “standards” development or as part of an ongoing compliance requirement or through an investigation or enforcement proceeding may be maintained as confidential so long as they do not constitute “emissionsdata.”50 UnderEPA’sregulations,thedeterminationofwhich information is “emissions data” has been made on a case-by-case basis based on information submitted by individual emission sources.51 In July 2010, EPA published a proposal (hereinafter “Proposed CBI Rule”) that, if finalized, will constitute EPA’s prospective determination of which information required to be submitted under Subpart I will qualify as “emissions data” and, therefore, will not be eligible for confidential treatment under the Rule.52 TheProposedCBIRuleidentifieswhichinformationEPAwillconsider “emissions data” by reference to specific sections in Subpart I. At the time of its publication in July 2010, the Proposed CBI Rule referred to the information requirements of Subpart I as they existed then; this was the Re-Proposed Subpart I, which, as described in Section II(B)(1)(a) above, required submission of information, including emission factors under § 98.96(d), only for certain process categories, and not on a recipe-specific basis. Therefore, the determination of which data submitted under Subpart I constitute “emissions data” was made by EPA without any evaluation of the Final Subpart I’s recipe- specific reporting regime. If EPA were to persist in its position articulated in the Proposed CBI Rule, much of the information underlying the Final Subpart I’s emissions calculations,53 including the recipe-specific emissions factors, would constitute “emissions data,” thereby making recipe-specific information vulnerable to public disclosure even more broadly outside the enforcement and permitting contexts described above. Although SIA commented on the Proposed CBI Rule,54 it was obviously impracticable for SIA to comment on the Proposed CBI Rule as it would ultimately apply -- i.e., to the submission of recipe-specific emission factors. The mere fact that the Final Subpart I would probe so deeply into the semiconductor fabrication process as to create such vulnerabilities to intellectual property underscores why an individual recipe-based approach is not sound for the long term, even if EPA were to address the definitional and other issues to render the Final Subpart I technically feasible. In addition, EPA utterly failed to recognize and address these intellectual property threats when promulgating the Final Subpart I, and therefore, EPA must grant reconsideration on this issue to rectify these serious gaps in its legal and policy analysis. c. Exorbitant Costs Section III.B. below addresses the full range of economic impacts of the Final Subpart I not considered by EPA due to flawed assumptions underlying its Economic Impact Assessment. However, an additional element of technical impracticality of an individual recipe-by-individual recipe measurement approach pertains to its exorbitant costs. Thus, we review those exorbitant costs briefly in this context. As explained in Section III.B. below, SIA engaged ISMI to survey large facilities to determine the true burden to the semiconductor industry of complying with a recipe-based measurement approach. This survey requested companies to assume compliance with the Final Subpart I was technically feasible and would require measurement testing of all dis-“similar” recipes. Notably, ISMI estimated -- using conservative assumptions which likely underestimate costs -- $56 million to perform such testing in the first year, and $18 million per year in subsequent years, not even taking into account production downtime.55 These costs dwarf EPA’s estimates,56 which as detailed in Section III.B., rely on flawed assumptions. As further evidence of the exorbitance -- and therefore of technical impracticality -- of an individual recipe-based measurement approach, SIA has performed a comparison of the costs of this approach along with total compliance costs for other industry sectors subject to GHG reporting. EPA’s estimate of compliance costs for all sectors, which SIA determined by totaling estimates provided in the September 2009 Regulatory Impact Assessment (RIA)57 for the initially finalized GHG reporting rule and in the Preambles for subsequently finalized GHG reporting subparts,58 is approximately $165 million in the first year, and $95 million per year in subsequent years. Thus, based on ISMI’s estimate, the cost to the semiconductor industry to develop dis-“similar” individual recipe-specific emissions factors equates to more than one-third (34%) of EPA’s estimate of first year costs for all sectors, and almost one-fifth (18%) of subsequent annual costs for all sectors. This cost proportion would appear wholly unreasonable, especially given that the semiconductor industry’s F-gas emissions comprise only 0.08% of the total GHG emissions inventory.59 A per ton CO2e60 analysis further underscores this point. EPA has estimated both the first year and subsequent annual costs for Subpart I compliance at $0.33/ton. EPA already has acknowledged that these estimated Subpart I costs are the highest CO2e per ton compliance costs of any GHG reporting subpart by a substantial margin.61 That margin grows to an untenable level, however, when applying ISMI’s cost estimates for the Recipe-Specific Utilization and By-Product Formation Rates requirement alone. In particular, applying the ISMI first and subsequent year cost estimates of $56 million and $17 million respectively per year to EPA’s emissions estimate for the semiconductor industry of 5.7 million tons CO2e,62 the per CO2e ton cost of complying with only the s/c etch recipe aspect of Subpart I would be $9.80/ton in the first year, and $2.98/ton per year in subsequent years. These costs are 35 and 20 times greater than the next highest sectors’ first year and subsequent year per ton costs,63 and 122 and 60 times more than the first year and subsequent year averages for all sectors. In view of the ISMI numbers likely underestimating costs and only being for partial compliance, it is clear that the Final Subpart I would require the U.S. semiconductor industry to incur compliance costs lacking any reasonable proportion to the industry’s emissions.64

#### Semiconductors are key to US nuclear modernization

Chandratre et al 7

(V.B. Chandratre et al 7, Menka Tewani, R.S. Shastrakar, V. Shedam, S. K. Kataria and P. K. Mukhopadhyay Electronics Division, Bhabha Atomic Research Centre “AN APPROACH TO MODERNIZING NUCLEAR INSTRUMENTATION: SILICON-BASED SENSORS, ASIC AND HMC” October, <http://www.barc.ernet.in/publications/nl/2007/200710-2.pdf>)

Modernization of nuclear instrumentation is pursued for realizing the goal of compact portable nuclear instruments, detector mount electronics and related instrumentation that can be designed, developed and manufactured, to mitigate contemporary instrumentation challenges. The activity aims at indigenous design and development of crucial components of nuclear instrumentation. Efforts are also undertaken to develop the critical microelectronics technologies to fulfill the gaps in nuclear instruments “ end to end”. The activity’s objective has been fulfilled by working in close collaboration with semiconductor foundries and HMC (Hybrid Micro Circuits) facilities. Various ASIC, sensors, IP cores, HMC, display devices and critical instrumentation modules developed, are discussed. The design and development of nuclear instruments require a variety of high performance components and sensors. Till recently these components were available and activity based on this approach has grown mature, with good expertise in related areas but has availability and obsolescence issues. As the technologies have moved up, various competing devices, techniques and technologies are available today. It’s important and as well prudent to catch up with these cutting edge developments, for a very strong reason that we have not been able to catch up with previous technology movements. Technology updates are difficult and have higher lead times with steeper learning curve. The Electronics Division has taken a modest initiative in fulfilling the gap in this area. Care has been taken to develop critical instrumentation by an approach of “mix and match”, integrating the newer development in the existing instrumentation on the basis of merit and requirements. Nuclear instrumentation has been a strong driver for technology developments worldwide. The low / medium energy instrumentation requirements we meet fairly with combination of NIM, CAMAC, FASTBUS and VME-based instrumentation. With use of the sensors of higher granularity, higher event rate, imaging and tracking requirements coupled with complex trigger mechanism, the approach has changed to low power detector mount electronics or monolithic sensor with electronics. Rapid developments in semiconductor technology have aided in realizing this concept.

#### Nuclear war

John P. Caves 10, Senior Research Fellow in the Center for the Study of Weapons of Mass Destruction at the National Defense University, “Avoiding a Crisis of Confidence in the U.S. Nuclear Deterrent”, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ada514285>

Perceptions of a compromised U.S. nuclear deterrent as described above would have profound policy implications, particularly if they emerge at a time when a nucleararmed great power is pursuing a more aggressive strategy toward U.S. allies and partners in its region in a bid to enhance its regional and global clout. ■ A dangerous period of vulnerability would open for the United States and those nations that depend on U.S. protection while the United States attempted to rectify the problems with its nuclear forces. As it would take more than a decade for the United States to produce new nuclear weapons, ensuing events could preclude a return to anything like the status quo ante. ■ The assertive, nuclear-armed great power, and other major adversaries, could be willing to challenge U.S. interests more directly in the expectation that the United States would be less prepared to threaten or deliver a military response that could lead to direct conflict. They will want to keep the United States from reclaiming its earlier power position. ■ Allies and partners who have relied upon explicit or implicit assurances of U.S. nuclear protection as a foundation of their security could lose faith in those assurances. They could compensate by accommodating U.S. rivals, especially in the short term, or acquiring their own nuclear deterrents, which in most cases could be accomplished only over the mid- to long term. A more nuclear world would likely ensue over a period of years. ■ Important U.S. interests could be compromised or abandoned, or a major war could occur as adversaries and/or the United States miscalculate new boundaries of deterrence and provocation. At worst, war could lead to state-on-state employment of weapons of mass destruction (WMD) on a scale far more catastrophic than what nuclear-armed terrorists alone could inflict.

#### Leads to GHG regulation of aviation and aerospace—kills the industry, modernization, and safety

Clinton J. Woods, House Energy and Environment Committee Staffer, GMU Masters, Spring 2009, Ground Control to EPA: The Regulation of Aviation Greenhouse Gas Emissions under the Clean Air Act, http://digilib.gmu.edu/dspace/bitstream/1920/6541/1/79-318-1-PB.pdf

Due to a variety of recent legal and political developments, aviation interests face the potential regulation of greenhouse gas emissions from aircraft, aircraft engines, and aviation operations by the Environmental Protection Agency (EPA) under Section 231 of the Clean Air Act (CAA). **This significant turn of events could radically alter the regulatory, environmental, economic, and safety landscape confronting the airline and aerospace industries** at the federal level. This paper will assess the driving forces prompting this outcome, including: a more environmentally activist Obama presidency (and the corresponding character of the EPA); the Supreme Court’s 2007 decision in Massachusetts v. EPA; Congressional pressure for a climate change solution; petitions from both state governments and nonprofit organizations to the EPA over aviation emissions; and the EPA’s recently released blueprint for economy-wide greenhouse regulation under the Clean Air Act. Also playing a significant role in this controversy, but not extensively covered in this paper, are recent developments in climate change science by the UN’s Intergovernmental Panel on Climate Change and the international legal ramifications resulting from a unilateral adoption of aviation emissions standards under the Chicago Convention. After discussing the viability and inevitability of EPA aviation regulations, the paper will evaluate the most likely emissions options under the Clean Air Act based on their political and economic implications. I. Background of the Clean Air Act The Clean Air Act, originally enacted in 1970 and with the last major amendments in 1990, authorized state and federal governments to create air pollution emissions regulations for both stationary and mobile sources.1 Section 231 of the Clear Air Act (herein “Section 231”) requires the Administrator of the EPA to commence a study of aircraft emissions to determine “(A) the extent to which such emissions affect air quality in air quality control regions throughout the United States, and (B) the technological feasibility of controlling such emissions.” In the next subdivision of this section, the statute states: (2) (A) The Administrator shall, from time to time, issue proposed emission standards applicable to the emission of any air pollutant from any class or classes of aircraft engines which in his judgment causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare. (B) (i) The Administrator shall consult with the Administrator of the Federal Aviation Administration on aircraft engine emission standards. (ii) The Administrator shall no t change the aircraft engine emission standards if such change would significantly increase noise and adversely affect safety.2 As a result of recent legal interpretations that conclude greenhouse gas emissions are pollutants that might “endanger public health or welfare,” states and environmental non-profit groups have seized upon the Section 231 requirement that the EPA Administrator “shall” issue aviation standards under the Act.3 Pursuant to the subdivision mentioned, the EPA released a study on aircraft emissions and the feasibility of control in 1972.4 Subsequently, the Agency has enacted regulations to control a variety of aviation pollutants, including smoke, fuel venting, carbon monoxide, nitrogen oxide, particulate matter, and ozone, in 19735, 19976, and 20037. With the more recent finding that carbon dioxide represents a regulated pollutant under the Clean Air Act that could trigger a “public health and welfare” finding, greenhouse gas emissions appear to be the next frontier for EPA regulation. II. Political and Legal Rationale for EPA Regulation under Section 231 Due to a number of political and legal factors, the **regulation of** both in-**use and new aviation greenhouse gas emissions should be viewed as all but inevitable**. The recent election of President Barack Obama is likely to usher in a new era of climate regulations, a fundamental campaign promise, both through an across-the-board cap-and-trade program for greenhouse gas emissions and specific technology-forcing standards developed by the EPA for individual emissions sources. Drawing from statements by several of Obama’s legal advisors, a recent article in the news service Energy & Environment Daily predicted the potential (and probable) actions by the new President: Some envision Obama moving as soon as he takes office Jan. 20, 2009, by issuing a longsought endangerment finding that declares greenhouse gas emissions a threat to public health or welfare, an opening salvo that would clear the way for a wide range of EPA regulations on power plants, automobile and other major sources of heat-trapping gases. Others expect Obama to outline his executive powers in an early speech and then allow EPA and other agencies to work through the details.8 Given the substantial discretion granted to the EPA Administrator under Section 231, the newly approved Administrator in the Obama administration further points to an expanded EPA role in aviation regulation under the Clean Air Act. Both Obama’s eventual selection to head the Agency, Lisa Jackson, formerly New Jersey Environmental Protection Commissioner, and the other name frequently mentioned for this position, Mary Nichols, head of the California Air Resources Board, signal an endorsement of Clean Air Act aviation regulation.9 Both New Jersey and California signed onto a December 2007 petition requesting that EPA exercise its authority under Section 231(a) of the Clean Air Act to regulate greenhouse gas emissions from new and existing aircraft and aircraft engines.10 Furthermore, Congressional action could authorize an expanded EPA role in aviation emissions. In a discussion draft of comprehensive climate change legislation released in October 2008 by then-Chairman of the House Energy and Commerce Committee, John Dingell (D-MI), the proposed provisions would have triggered EPA regulation of aviation emissions: For purposes of paragraph (2)(A) of section 231(a), the Administrator shall be treated as having made a determination under that paragraph that greenhouse gases emitted from new aircraft engines cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.11 This document was widely considered to be the moderate blueprint for legislative efforts to address climate change in the 111th Congress. However, in October 2008 Congressman Henry Waxman (D-CA) ousted Dingell from his Chairmanship of the Energy and Commerce Committee. Waxman is expected to be more environmentally radical than Dingell, making EPA authority over aviation through legislative fiat a very real possibility.12 The Supreme Court’s 2007 decision in the case of Massachusetts v. EPA provides further fuel to the EPA regulatory fire. While the case focused on the ability and obligation of the EPA to regulate greenhouse gas emissions from new motor vehicles under Section 202 of the Clean Air Act, the language interpreted by the Court is nearly identical to the aircraft emissions guidelines in Section 231. For example, Section 202 states “The Administrator shall by regulation prescribe...standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicles, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.”13 In this 5-4 decision, the Court found that “greenhouse gas emissions fit well within the Clean Air Act’s capacious definition of air pollutant” and that the contribution of emissions from the U.S. transportation sector was “enormous” and “a meaningful contribution to greenhouse gas emissions.”14 This sweeping interpretation of the Clean Air Act, combined with recent climate science indications that global warming threatens public health, provides the legal justification for EPA regulation of motor vehicle emissions and, due to the substantially similar language in Section 231, aircraft emissions. In an amicus curiae brief15 responding to the state petition for EPA action under Section 231, lawyers for the Air Transport Association (ATA) and the Aerospace Industry Association (AIA) tried to outline limits on the EPA’s legal authority. They argued that “Section 231 does not require the EPA to issue ‘technology-forcing’ standards, but instead provides that the EPA Administrator, ‘from time to time,’ may issue proposed standards for those emissions which ‘in his judgment causes, or contributes to, air pollution’ and then issue such final regulations ‘as he deems appropriate.’”16 There are also a variety of international legal objections that could arise under the International Civil Aviation Organization and the Chicago Convention if EPA regulation extended to foreign air carriers.17 While both of these positions represent logical justifications for statutory restraint, it appears that the political and legal momentum in favor of regulation is likely to prevail. III. Possible EPA Options under the Clean Air Act Prompted by the Massachusetts v. EPA decision, on July 30, 2008, the EPA released an Advanced Notice of Proposed Rulemaking (ANPR) on “Regulating Greenhouse Gas Emissions Under the Clean Air Act.”18 Prefaced by statements of opposition from a variety of federal agencies and the current EPA Administrator, Stephen Johnson, this sizable document provides a fairly detailed blueprint of the types of regulatory actions available to the EPA to control carbon dioxide and other greenhouse gas emissions under the Clean Air Act. This ANPR, while not binding, lays out technology-forcing mandates, operational requirements, and jurisdictional considerations as it relates to all stationary and mobile sources of pollution (from airplanes to lawnmowers to residential buildings). Finding that greenhouse gas emissions obviously endanger “public health or welfare” and trigger regulatory action under the Act, the EPA spent little time assessing the environmental and scientific problems caused by these pollutants. It is worth highlighting that, unlike the motor vehicle section of the Clean Air Act, Section 231 does not limit EPA regulation to new aircraft or aircraft engines. Therefore, any new regulatory regime established would have an even more significant impact by applying to both new and inuse aircraft.19 In the aviation portion of the ANPR, the EPA makes clear that, while the Federal Aviation Administration (FAA) has the primary role in aviation regulation in the United States, Section 231(a) of the Clean Air Act “authorizes...EPA to set technology-forcing standards to the extent appropriate.”20 The EPA also notes that over the last three decades the Agency has been involved in setting aircraft emissions standards for a variety of non-greenhouse gas pollutants. They further recognize the relatively small contribution of aviation carbon dioxide emissions to overall U.S sources (about 4%).21 The EPA displays a laundry list of technological controls on aircraft and aircraft engines, as well as operational measures to reduce greenhouse gas emissions in this sector. The technological mandates discussed include: balanced engine bypass ratios; aerodynamic drag and weight reductions; film surface grooves; hybrid laminar flow technology; blended winglets; spiroid tips; and alternative fuels. The operational changes mentioned in the ANPR are Reduced Vertical Separation Minimum (RSVM), Continuous Descent Approaches, and single-engine taxiing. While the EPA requests comments on all of these options, perhaps the most likely approach is the development of near-term and long-term aviation sector carbon dioxide or greenhouse gas emissions standards. The EPA says that such a standard, utilizing a fleet average of emissions for each airline, would allow flexibility for carriers to deploy technological efficiency and operational strategies to address the new regulation.22 The ANPR also mentions that, while these proposals would be designed to address emissions from gas turbine engines utilized in commercial aviation, the EPA’s “authority under the Clean Air Act extends to any aircraft emissions” including general or business aviation. While general aviation represents only about 1% of carbon dioxide from U.S. transportation, the EPA requested comments on test procedures and emission standards for this source.23 In addition to these recommendations, there are also a variety of other operational steps that could be applied to inuse aircraft, including: increase in the number of landing operations per hour; reduction of auxiliary power unit usage; coordination with air traffic control centers to select more fuelefficient routes and speeds; and reduction in levels of excess fuel carried.24 IV. Policy Ramifications of EPA Regulation of Aviation Greenhouse Gas Emissions **This** colossal shift in aircraft regulation **would have** a number of **consequences for** the **government, industry, and consumers**. In preliminary comments from the U.S. Department of Transportation (DOT) on the EPA’s ANPR, released as a supplementary document with the Federal Register publication, a number of serious economic and policy concerns are expressed in opposition to expanded EPA authority over aviation emissions.25 While some of the DOT’s (and, in turn, the FAA’s) objections can be chalked up to a bureaucratic turf battle, several of the questions raised need to be answered prior to full-scale EPA mandates of aircraft technology and operations. The first objection raised by DOT is economic in nature. The DOT spells out their reluctance to endorse the Clean Air Act as the best avenue for emissions reductions: We are concerned that attempting to regulate greenhouse gases under the Clean Air Act will harm the U.S. economy while failing to actually reduce global greenhouse gas emissions. Clean Air Act regulation would necessarily be applied unevenly across sources, sectors, and emissions-causing activities, depending on the particular existing statutory language in each section of the Act. Imposing Clean Air Act regulations on U.S. businesses, without an international approach that involves all of the world’s major emitters, **may** well drive U.S. production, jobs, and emissions overseas**, with no net improvement to greenhouse gas concentrations**...If implemented, the actions that the draft contemplates would significantly increase energy and transportation costs for the American people and U.S. industry with no assurance that the regulations would materially affect global greenhouse gas atmospheric concentrations or emissions.26 **This argument is particularly true in** light of an **airline and aerospace industry** that is fully committed to reducing fuel usage for business reasons; the disruption of business operations by a an EPA that lacks extensive regulatory experience in aviation is highly probable. . The costs of complying with new and unproven EPA mandates regarding technology and operations would be significant. As Robert Stavins, professor of Harvard University’s environmental economics program and advocate for federal greenhouse gas restrictions, notes, use of the Clean Air Act would be “extremely costly. It plays into the hands of the opposition. It’s going to make action on climate look silly and costly.”27 The possibility that U.S. regulations could only apply to American carriers as a result of EPA decisions or international legal proceedings would further magnify the potential harm to domestic aviation interests. The broader economic impacts could be substantial, as both ATA and AIA estimate that their industries do nearly $200 billion in business annually.28 Second, regulation by the EPA ignores the potential benefits that will result from Next Generation Air Transportation System or NextGen, the interagency effort to modernize American airspace through satellite-based air traffic navigation. Led by the FAA and with participation from private organizations, the Department of Defense, NASA, the Department of Homeland Security, the National Oceanic and Atmospheric Administration, and the White House Office of Science and Technology Policy, NextGen seeks to deploy technology by 2025 to allow all aircraft and airports in U.S. airspace to adapt to weather, traffic, trajectory, and security issues in real-time.30 Many of the operational changes discussed in the ANPR would be more efficiently accomplished by the deployment of better technology to govern air traffic control, navigation, and congestion. The DOT comments: “Through NextGen, the Department’s Federal Aviation Administration, in cooperation with private sector interests, is actively pursuing operational and technological advances that could result in a 33 percent reduction in aircraft fuel burn and carbon dioxide emissions.”31 It is also worth noting that there is an overwhelming economic justification for airlines to achieve greater fuel economy as U.S. airlines spent $60 billion for fuel in 2008. NextGen offers great promise toward that end. Third, EPA regulation ignores the consensus-driven process of environmental standardsetting that is currently being pursued by the United States through ICAO. Many of the proposals included in the ANPR (fleet averaging or flat carbon dioxide standards) have been considered and rejected as unworkable by ICAO and the aviation community. The FAA is actively working through ICAO to ensure that minimum, market-based, international standards are agreed to. DOT lays out the benefits of the ICAO approach: “The FAA’s emphasis on international collaboration is compelled by the international nature of commercial aviation and the fact that performance characteristics of engines and airframes-environmental and otherwisework best when they maximize consistency among particular national regulations.”32 Finally, EPA regulation under Section 231 would usurp FAA authority and potentially **hinder the safety guidelines that should govern any new aviation standards.** While the EPA goes to great lengths to promise consultation and collaboration with the FAA, they lack the experience and expertise to initiate, issue, or monitor aviation regulations. In particular, the operational controls suggested in the ANPR would go through channels “without consideration of the safety implications that the FAA is legally required to address.”33 There is a risk that overlapping, duplicative, and inconsistent aviation standards could result in confusion and safety lapses. The ATA and AIA find a statutory basis for this safety consideration, emphasizing that “Congress intended the CAA not to require EPA to set the most stringent aircraft emissions standards that technically feasible, but rather, to ensure that its aircraft emissions standards do not affect aircraft safety.”34 These groups underscore this point by arguing that “sound policy considerations thus make the compelling argument that aircraft emissions standards must move forward based upon proven technology, not by testing the edge of the technology envelope.”35 V . Conclusion A simple comparison of the Clean Air Act and the FAA statutes and regulations governing aviation demonstrates that **the Clean Air Act** and the EPA **are ill-suited** instruments to comprehensively address aircraft emissions. The **potential for** great **safety, regulatory, and economic harm** as a result of this new process demands a clear delineation of authority and responsibilities between the EPA and FAA. Despite the problems discussed above, the recentlyaltered political and **legal landscape** regarding climate change policy **makes an EPA seat at the aviation table nearly inevitable**.

#### US leadership key to harmonize global aviation tech—otherwise, regional aviation industries fail

Dan Elwell, Vice President of Civil Aviation at Aerospace Industries Association, 7/18/12, MAINTAINING U.S. LEADERSHIP IN AEROSPACE INDUSTRY, Congressional Testimony, Lexis

Because aviation is fundamentally global, **it is critical that the U. S. maintain its leadership role in the international bodies that set standards and harmonize technical specifications for aviation technologies**. It is not unusual for technical or policy differences to arise among nations and regions of the world on aviation matters. For example, the recent episodes of volcanic ash over the European continent led to differences of opinion about our ability to detect and gauge the effects of microscopic ash particles on an aircraft engine. More recently, we have experienced the European Union's desire to impose emissions trading charges on the world's air carriers out of a misguided desire to move more forcefully on the issue of aircraft emissions.

In cases like these, the United States must maintain its presence and reputation in the international arena, particularly in the future as market dynamics shift to emerging nations. As these nations and their industries grow, they will expect a stronger voice in international technical and policy discussions, and **the U. S. must maintain a leadership role in the face of those shifts**. In air traffic control technology, for example**, if the U. S. falls behind other nations, it will be more difficult to** harmonize our systems **with those** being developed in Europe, Asia, and other regions **of the world.** This could be a serious problem for our aircraft, engine and avionics manufacturers, who **need to provide systems capable of interacting with ATC infrastructure throughout the world.**

#### Key to Asia-Pacific interdependence

IATA, 11/9/12, Infrastructure to Support Asian Growth, www.iata.org/pressroom/pr/pages/2012-11-09-01.aspx

The International Air Transport Association (IATA) urged **Asia-Pacific aviation leaders** to **focus on airport and air traffic management infrastructure** as the region’s demand for connectivity continues to grow. “Aviation is a vital part of Asia’s economy, supporting 24 million jobs and nearly half-a-trillion dollars of GDP. Connectivity, facilitated by aviation, is a critical link to markets and a generator of wealth—both material and of the human spirit. **Ensuring the timely development of sufficient and cost-efficient infrastructure capacity is a priority for the continued successful growth of air transport in Asia-Pacific**,” said Tony Tyler, IATA’s Director General and CEO. Tyler was speaking to delegates at the Association of Asia Pacific Airlines (AAPA) Assembly of Presidents in Kuala Lumpur. Airports: IATA advocated for a prudent approach to private investment in the development of airport infrastructure to support demand growth in the Asia-Pacific region. The comments come as a trend is emerging across the region with governments in Vietnam, Indonesia and the Philippines all considering the participation of private investors as they plan for the development of airport infrastructure. The Korean government is considering private equity participation in Incheon airport. “I am not advocating for or against private participation. But there have been enough mistakes made when engaging the private sector in airport development. These should not be repeated. When governments work with private investors to develop infrastructure they must establish an effective economic and service-level regulatory framework to ensure that the national interest is well protected. That means ensuring that air connectivity is both cost-effective and efficient,” said Tyler. Tyler cited the example of Delhi Airport, where the 46% concession fee is making the airport unaffordable for airlines. Despite several appeals from the industry, the Airport Economic Regulatory Authority approved an increase of 346%. “Private sector participation was able to build a great hub facility. But the framework for economic regulation is not sufficiently supporting the long-term need for cost-efficient connectivity to fuel economic growth,” said Tyler. He also noted that when the Hong Kong government looked at airport privatization in 2003-4, the conclusion was to keep Hong Kong International Airport fully under government ownership as the best way to ensure that it delivered maximum benefit to the Hong Kong economy. Air Traffic Management (ATM): IATA urged cross-border regional thinking for the development of Asia-Pacific’s ATM infrastructure. “Asia-Pacific is not immune to air traffic congestion issues, and these will grow acute if they are not well-managed with a regional perspective. The Seamless **Asian Sky initiative is helping to define the way forward by harmonizing procedures and interoperable technology between states**, bearing in mind it needs to be cost efficient at the same time. We must not repeat the mistakes made in Europe where efforts to implement a Single European Sky are stalled because states are not delivering,” said Tyler. The annual cost of airspace fragmentation to the European economy is estimated at over EUR 5 billion annually and the cost to the environment is 16 million tonnes of CO2 emissions.

#### Nuclear war

**Plate**, East Asia Expert, Adjunct Professor of Communications @ UCLA, 6/28/**’3**

(Tom, Neo-cons a bigger risk to Bush than China, Strait Times, l/n)

But imagine a China disintegrating- on its own, without neo-conservative or Central Intelligence Agency prompting, much less outright military invasion because the economy (against all predictions) suddenly collapses. That would knock Asia into chaos. A massive flood of refugees would head for Indonesia and other places with poor border controls, which don’t’ want them and cant handle them; some in Japan might lick their lips at the prospect of World War II revisited and look to annex a slice of China. That would send Singapore and Malaysia- once occupied by Japan- into nervous breakdowns. Meanwhile, India might make a grab for Tibet, and Pakistan for Kashmir. Then you can say hello to World War III, Asia style. That’s why wise policy encourages Chinese stability, security and economic growth – the very direction the White House now seems to prefer.

#### Asia is highest risk

Izzadeen ‘13

Ameen, geopolitical correspondent for the Daily Mirror, “ Signs of possible third world war in Asia,” http://www.dailymirror.lk/opinion/172-opinion/25780-signs-of-possible-third-world-war-in-asia.html

Writing to the prestigious Foreign Policy journal, former Australian Prime Minister Kevin Rudd says: “There are no ordinary times in East Asia. With tensions rising from conflicting territorial claims in the East China and South China seas, the region increasingly resembles a 21st century maritime redux of the Balkans a century ago — a tinderbox on water. Nationalist sentiment is surging across the region, reducing the domestic political space for less confrontation approaches... In security terms, the region is more brittle than at any time since the fall of Saigon in 1975.” At the centre of the dispute is what China calls Diaoyu islands and Japan calls Senkaku. Brinkmanship is on open display in the waters surrounding the oil-and-natural-gas-rich islets -- with both countries sending military vessels and aircraft and resorting to other provocations. The dispute took a turn for the worse when Japan in September last year nationalised the islets saying that it had bought them from the title-deed holder, a Japanese citizen. China on the other hand insists that the islets belong to it, pointing to pre-communist era maps that show the islets coming within China’s maritime boundary. Japan, however, shows its own old maps and claims that under the Law of the Sea principles, the islets are the rightful property of Japan. Last week, Japan accused China of using hi-tech weapons to lock the radars of a destroyer and a helicopter near the disputed islands. Abe demanded that China apologise. China rejected the demand saying Japan’s charge was a figment of its imagination. Abe’s Liberal Democratic Party won Japan’s elections in December on a campaign pledge that it would take tougher line with China. “The Japanese side’s remarks were against the facts. Japan unilaterally made public untrue information to the media and senior Japanese government officials made irresponsible remarks that hyped up the so-called ’China threat’…. Tokyo had recklessly created tension and misled international public opinion. …. Japan’s remarks are completely making something out of nothing. We hope Japan will renounce its petty tricks,” Chinese statements said. In China, television chat shows and newspaper analyses whip up nationalistic feelings, not only by asserting China’s right to the disputed islands but also by reminding the people about how cruel the Japanese occupation of Manchuria had been. “The holy territory of China is not for sale” is the refrain of Chinese leaders and analysts. Burning the Japanese flag and staging protests outside Japanese plants and business premises are common in China. The war of words has been upping the tension in the region for the past two years. The situation is so precarious that even optimists who say that neither country is naïve enough to go to war will, in the same breath, refuse to rule out a conflict. Adding to the powder-keg situation is the subtle but rapid build-up of the US military presence in the region. It was only last year that the Barack Obama administration espoused its ‘Pivot to Asia’ policy that stresses the importance of security and freedom of navigation in the Asia-Pacific and the Indian Ocean regions. As part of its military build-up in the region, the US has set up a new base in Darwin, Australia, expanded the base in Guam, modified the existing bases and facilities in Japan, South Korea and the Philippines, conducts joint military exercises with ASEAN nations and sells sophisticated weapons to China’s neighbours, including Vietnam and India, two countries that have gone to war with the Communist giant, which is today the world’s second economic power after the US. Some analysts say the US is fishing in the troubled waters and profiteering from the tension. An Inter-Press Service article by Richard Javad Heydarian says, “Facing a stubborn economic downturn at home, the dramatic boost in US defence sales to the region underlines Washington’s growing emphasis on a primarily military-oriented (as opposed to trade-and-investment-driven) approach to re-asserting its position as an ‘anchor of peace and stability’ in the region. “Among the biggest beneficiaries of growing US military commitment to the region is the Aerospace Industries Association (AIA), a massive trade group that includes top Pentagon suppliers such as Lockheed Martin Corp, Boeing Co and Northrop Grumman Corp. It underscores the extent to which the US ‘pivot’ has energised the American industrial-military complex, further dimming the prospects for a peaceful resolution of the ongoing disputes.” This week’s nuclear test by North Korea also gives the United States an excuse to boost its military sales and presence in the region. President Obama during his State of the Union address on Tuesday did not fail to warn the reclusive regime, which is China’s only strategic partner in the hostile neighbourhood. The US is also greatly worried about predictions that by 2030 it would not be a superpower. Power is not meant to be let go. It needs to be acquired, protected and enhanced. That’s political realism. Despite the United States’ trade and economic dependency on China, a cold war between the two is widening, with countries in the region either aligning or seen to be aligning with either of the super powers. In South Asia, Sri Lanka is seen to be tilting towards China, while India is strengthening its military cooperation with the United States. If the current dispute between China and Japan sparks a war, the entry of the United States in defence of Japan is inevitable. It is only a matter of time before other regional countries – and who knows, even India – will be drawn into the conflict. Sri Lanka is also vulnerable. One cannot rule out Russia’s involvement on the side of China. It was only last week that Japan accused Russia of sending war planes over its territory. Japan and Russia have been embroiled in a bitter dispute over ownership of the Kurile Islands. Besides trade interdependence, the only deterrent that prevents such a world war is the fear of the use of nuclear weapons. Like democracies do not go to war with each other, nuclear powers also do not. Will wars be fought on an understanding that belligerents won’t use nuclear weapons? Is Diaoyu/Senkaku worth a world war? It is not, but China’s sense of insecurity is. China is worried about the reality of being surrounded by hostile nations and powers. If this feeling of being insecure reaches the critical mass, that is the trigger for the next world war.

#### Asia is on the brink

Symonds 2/12/13

Peter, International Committee of the Fourth International, “The danger of war in Asia,” http://www.wsws.org/en/articles/2013/02/12/pers-f12.html

Two recent commentaries highlight the growing nervousness in ruling circles internationally about the danger of a new world war erupting in Asia. Both point to the region’s extremely tense maritime disputes, especially between China and Japan, and draw parallels with the build-up of competing interests and alliances that led inexorably to the eruption of World War I in 1914. In an article entitled “A Maritime Balkans of the 21st Century?” in the Foreign Policy journal on January 30, former Australian Prime Minister Kevin Rudd declared: “There are no ordinary times in East Asia. With tensions rising from conflicting territorial claims in the East China and South China seas, the region increasingly resembles a 21st century maritime redux of the Balkans a century ago—a tinderbox on water. Nationalist sentiment is surging across the region, reducing the domestic political space for less confrontation approaches... In security terms, the region is more brittle than at any time since the fall of Saigon in 1975.” Writing in the Financial Times on February 4, commentator Gideon Rachman made the same point in his article, “The shadow of 1914 falls over the Pacific.” He wrote: “The flickering black and white films of men going ‘over the top’ in the First World War seem impossibly distant. Yet the idea that the great powers of today could never again stumble into a war, as they did in 1914, is far too complacent. The rising tensions between China, Japan and the US have echoes of the terrible conflict that broke out almost a century ago.” The tone of the articles is not shrill. Neither writer believes that world war is imminent, but, in their sober assessments, neither do they rule it out. The most immediate flashpoint is the territorial dispute over the rocky outcrops in the East China Sea known as Senkaku in Japan and Diaoyu in China. Since last September, when Tokyo “nationalised” the islets, increasingly dangerous manoeuvres by Chinese and Japanese vessels and aircraft in the disputed waters and airspace have raised the risk of an incident that could spark open conflict.

#### Best studies validate our econ impact

Jedidiah **Royal 10**, Director of Cooperative Threat Reduction at the U.S. Department of Defense, “Economic Integration, Economic Signalling And The Problem Of Economic Crises”, in Economics of War and Peace: Economic, Legal and Political Perspectives, ed. Goldsmith and Brauer, p. 213-215

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, particularly during 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 lends to amplify the extent to which international and external conflicts self-rein force each other. (Blombcrj! & 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 external military conflicts to create a 'rally around the flag' effect. Wang (1996), DeRouen (1995), and Blombcrg. Mess, 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 arr 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 the use of force.

# 2AC

## t-restriction

#### NSPS bans coal

Brownell et al 12

F. William Brownell, Henry V. Nickel, Norman W. Fichthorn, Allison D. Wood, Hunton & Williams LLP, 9/6/12, LASBRISASENERGYCENTER,LLC,etal., Petitioners, v. UNITED STATES ENVIRONMENTAL ) PROTECTION AGENCY and LISA PEREZ JACKSON, Administrator, United States Environmental Protection Agency, Respondents, insideEPA database

Here, by contrast, EPA published a proposed CO2 NSPS that cannot be achieved by any new coal-fired EGU to which it applies. By virtue of that standard having becoming “applicable” as of April 13, 2012, it now sets the “floor” for determining BACT for those new units and obligates them to demonstrate that they can comply with a standard that is unachievable, a showing that cannot be made.8

The fundamental “alter[ation]” of the PSD “legal regime” effected by EPA’s publication of the April 13 Notice is much more significant than the impediment to permitting that the Supreme Court in Sackett found sufficient to satisfy the second Bennett criterion. In Sackett, the Supreme Court found that “‘legal consequences . . . flow[ed]’” from EPA’s issuance of a compliance order under section 309 of the Clean Water Act, insofar as such issuance “severely limit[ed] the Sacketts’ ability to obtain a permit for their fill from the Army Corps of Engineers,” in light of the Corps’ regulations. 132 S. Ct. at 1371-72 (quoting Bennett, 520 U.S. at 178) (emphasis added). In contrast, since April 13, 2012, electric generators’ ability to obtain PSD permits for new coal-fired EGUs has been not merely “limited” but eliminated entirely.

#### Counter-interp—restrictions include limiting conditions

Plummer 29 J., Court Justice, MAX ZLOZOWER, Respondent, v. SAM LINDENBAUM et al., Appellants Civ. No. 3724COURT OF APPEAL OF CALIFORNIA, THIRD APPELLATE DISTRICT100 Cal. App. 766; 281 P. 102; 1929 Cal. App. LEXIS 404September 26, 1929, Decided, lexis

The word "restriction," when used in connection with the grant of interest in real property, is construed as being the legal equivalent of "condition." Either term may be used to denote a limitation upon the full and unqualified enjoyment of the right or estate granted. The words "terms" and "conditions" are often used synonymously when relating to legal rights. "Conditions and restrictions" are that which limits or modifies the existence or character of something; a restriction or qualification. It is a restriction or limitation modifying or destroying the original act with which it is connected, or defeating, terminating or enlarging an estate granted; something which defeats or qualifies an estate; a modus or quality annexed by him that hath an estate, or interest or right to the same, whereby an estate may be either defeated, enlarged, or created upon an uncertain event; a quality annexed to land whereby an estate may be defeated; a qualification or restriction annexed to a deed or device, by virtue of which an estate is made to vest, to be enlarged or defeated upon the happening or not happening of a particular event, or the performance or nonperformance of a particular act.

#### This is the middle ground—

LVM Institute 96, Ludwig Von Mises Institute Original Book by Ludwig Von Mises, Austrian Economist in 1940, fourth edition copyright Bettina B. Greaves, Human Action, http://mises.org/pdf/humanaction/pdf/ha\_29.pdf

Restriction of production means that the government either forbids or makes more difficult or more expensive the production, transportation, or distribution of definite articles, or the application of definite modes of production, transportation, or distribution. The authority thus eliminates some of the means available for the satisfaction of human wants. The effect of its interference is that people are prevented from using their knowledge and abilities, their labor and their material means of production in the way in which they would earn the highest returns and satisfy their needs as much as possible. Such interference makes people poorer and less satisfied.

This is the crux of the matter. All the subtlety and hair-splitting wasted in the effort to invalidate this fundamental thesis are vain. On the unhampered market there prevails an irresistible tendency to employ every factor of production for the best possible satisfaction of the most urgent needs of the consumers. If the government interferes with this process, it can only impair satisfaction; it can never improve it.

The correctness of this thesis has been proved in an excellent and irrefutable manner with regard to the historically most important class of government interference with production, the barriers to international trade. In this field the teaching of the classical economists, especially those of Ricardo, are final and settle the issue forever. All that a tariff can achieve is to divert production from those locations in which the output per unit of input is higher to locations in which it is lower. It does not increase production; it curtails it.

#### “On production” means there’s no limits disad

Dictionary.com, http://dictionary.reference.com/browse/on

On

preposition

1.so as to be or remain supported by or suspended from: Put your package down on the table; Hang your coat on the hook.

2.so as to be attached to or unified with: Hang the picture on the wall. Paste the label on the package.

#### Also says a restriction isn’t a prohibition

Sinha 6

S.B. Sinha is a former judge of the Supreme Court of India. “Union Of India & Ors vs M/S. Asian Food Industries,” Nov 7, http://webcache.googleusercontent.com/search?q=cache:http://www.indiankanoon.org/doc/437310/

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. The Central Government announced its Foreign Trade Policy in exercise of its power conferred upon it under Section 5 of the 1992 Act by a notification dated 7th April, 2006. The said policy was issued in public interest. Chapter 1A of the said policy also provides for legal framework. Clause 1.5 thereof reads as under: "1.5 In case an export or import that is permitted freely under this Policy is subsequently subjected to any restriction or regulation, such export or import will ordinarily be permitted notwithstanding such restriction or regulation, unless otherwise stipulated, provided that the shipment of the export or import is made within the original validity of an irrevocable letter of credit established before the date of imposition of such restriction." Clause 2.4 of the policy empowers the Director General of Foreign Trade to specify the procedures required to be followed by an exporter in any case or class of cases for the purpose of implementing the provisions of the 1992 Act, the Rules and the Orders made thereunder and the said policy. Such procedures were to be included in the Handbook which would be published by means of a public notice and such procedures may in the like manner be amended from time to time. It was stated: "The Handbook (Vol.1) is a supplement to the Foreign Trade Policy and contains relevant procedures and other details. The procedure of availing benefits under various schemes of the Policy are given in the Handbook (Vol.1)" The Handbook of Procedures which inter alia supplements the Foreign Trade Policy was also issued on 7th April, 2006 upon giving a public notice therefor. It contains nine chapters. Chapter 9 comprises of miscellaneous matters. Paragraph 9.12 lays down the manner in which date of shipment/ dispatch of exports would be reckoned. It inter alia provides: "However, wherever the Policy provisions have been modified to the disadvantage of the exporters, the same shall not be applicable to theconsignments already handed over to the Customs for examination and subsequent exports upto the date of the Public Notice. Similarly, in such cases where the goods are handed over to the customs authorities before the expiry of the export obligation period but actual Exports take place after expiry of the export obligation period, such exports shall be considered within the export obligation period and taken towards fulfillment of export obligation." HIGH COURT JUDGMENTS Whereas the Gujarat High Court invoking Paragraph 9.12 of the Handbook and having regard to the fact that the customs authorities cleared and permitted the loading of the goods and moreover the bill of lading had also been filed, opined that the respondents were entitled to export the goods in terms of the policy decision despite the said notification dated 27.06.2006, the Delhi High Court declared the notification dated 4.07.2006 as ultra vires. SUBMISSIONS Mr. Vikas Singh, learned Additional Solicitor General for Union of India, has raised the following contentions: (i) Clause 1.5 of the Foreign Trade Policy would not apply to a case where the export of goods are totally being prohibited and not merely regulated or restricted. (ii) Having regard to the definition of export and in particular the provision of Section 51 of the 1962 Act, the procedures laid down thereunder as envisaged under Sections 16 and 39 must be complied and they having not been complied with, the impugned judgment of Gujarat High Court cannot be sustained. (iii) Although the notification dated 4.07.2006 was wrongly worded but as thereby benefit was sought to be conferred on those who were not aware of the ban before 22.06.2006 and had opened letters of credit prior thereto were exempted from operation of the said notification, the order of prohibition shall be effective even if a concluded contract had been arrived at for export of goods. The learned counsel for the respondents, on the other hand, submitted: (i) In view of the Foreign Trade Policy issued by the Central Government under Section 5 of the 1992 Act, the amendments carried out therein shall only have a prospective effect and not a retrospective effect. (ii) As the Handbook of Procedures lays down supplemental provisions to the Foreign Trade Policy issued by the Director General of Foreign Trade in exercise of its power under the 1992 Act, the purported prohibition issued under the notification dated 27.06.2006 would not apply to a case where the formalities contained in Section 51 of the 1962 Act had been complied with. (iii) Clause 1.5 of the Foreign Trade Policy having provided for protection to those who were holders of letter of credit, the retrospective effect purported to have been given in terms of the notification dated 4.07.2006 was unconstitutional being hit by Article 14 of the Constitution of India. Would the terms 'restriction' and 'regulation' used in Clause 1.5 of the Foreign Trade Policy include prohibition also, is one of the principal questions involved herein. A citizen of India has a fundamental right to carry out the business of export, subject, of course to the reasonable restrictions which may be imposed by law. Such a reasonable restriction was imposed in terms of the 1992 Act. The purport and object for which the 1992 Act was enacted was to make provision for the development and regulation of foreign trade inter alia by augmenting exports from India. While laying down a policy therefor, the Central Government, however, had been empowered to make provision for prohibiting, restricting or otherwise regulating export of goods. Section 11 of the 1962 Act also provides for prohibition. When an order is issued under Sub-section (3) of Section 3 of the 1992 Act, the export of goods would be deemed to be prohibited also under Section 11 of the 1962 Act and in relation thereto the provisions thereof shall also apply. Indisputably, the power under Section 3 of the 1992 Act is required to be exercised in the manner provided for under Section 5 of the 1992 Act. The Central Government in exercise of the said power announced its Foreign Trade Policy for the years 2004-2009. It also exercised its power of amendment by issuing the notification dated 27.06.2006. Export of all commodities which were not earlier prohibited, therefore, was permissible till the said date. The implementation of the said policy was to be made in terms of the procedures laid down in the Handbook. The provisions of the 1992 Act, the Foreign Trade Policy and the procedures laid down thereunder, thus, provide for a composite scheme. In implementing the said provisions of the scheme, in the event an order of prohibition, restriction or regulation is passed, the provisions of the 1962 Act mutatis mutandis would apply. Section 50 of the 1962 Act provides for entry of goods for exportation. It enjoins a duty upon an exporter to make entry thereof by presenting a shipping bill to the proper officer in a vessel or aircraft. On receipt of the shipping bill, the proper officer has to arrive at its satisfaction that (i) the export of goods is not prohibited; (ii) the exporter has paid the duty assessed thereon and charges payable thereunder in respect of the said goods. Once he arrives at the said satisfaction, he will make an order permitting clearance and loading of the goods for exportation. The scheme of the Foreign Trade Policy postulates that when the policy provisions are amended which are disadvantageous to the exporters, the modification would not be attracted. It furthermore lays down that although actual export had not taken place but in the event goods are handed over to the custom authorities before expiry of the export obligation period but actual export takes place after expiry thereof, the same shall be considered within the export obligation and taken towards fulfillment of such obligation. Section 51 of the 1962 Act, therefore, does not say that unless and until the shipment crosses the international border, the notification imposing prohibition shall be attracted. Different stages for the purpose of the said Act would, therefore, be different. For interpretation of the provisions of the 1992 Act and the policy laid down as also the procedures framed thereunder vis-`-vis the provisions of the 1962 Act, the rate of custom duty has no relevance. What would be relevant for the said purpose would be actual permission of the proper officer granting clearance and loading of the goods for exportation. As soon as such permission is granted, the procedures laid down for export must be held to have been complied with. Strong reliance has been placed by the learned Additional Solicitor General upon a decision of this Court in Principal Appraiser (Exports), Collectorate of Customs and Central Excise and Others v. Esajee Tayabally Kapasi, Calicut [(1995) 6 SCC 536] wherein this Court was concerned with the change in the rate of duty and in that context the construction of Sections 16(1), 39 and 51 of the 1962 Act fell for its consideration. In relation to the rate of duty it was held that the date of "entry outwards" would be the relevant date with reference to which the rate of custom duty on the exported duty is to be worked out. In that case, the goods were cleared for a vessel known as S.S. Neils Maersk. However, for want of space therein goods were shut out. Necessary space for exporting those were secured in another vessel named S.S. P'Xilas wherefor fresh shipping bill was filed on 9.08.1996. It was in the peculiar fact of that case, this Court opined that the rate of export duty prevalent as on 9.08.1996 would be leviable stating: "...It becomes thus clear that the shipping bill as well as the ultimate entry outwards for the goods concerned sought to be exported must have reference to the vessel through which such goods are to be exported. Therefore, before any goods are exported out of Indian territorial waters which vessel is to be utilised for exporting them, becomes a relevant consideration. The shipping bill concerned has to be lodged with reference to a given vessel which is to carry these goods out of the Indian territorial waters and in connection with such a vessel the entry outwards has to be obtained and only thereafter the master of the vessel should allow the loading of the goods for being exported out of India. The rate of duty payable on such exported goods would, therefore, be the rate of duty that was prevalent at the time when entry outwards through a given vessel is obtained. There cannot be an entry outwards in connection with a vessel which does not actually carry such goods for the purpose of export. In the facts of the present case, therefore, conclusion is inevitable that earlier entry outwards for the vessel S.S. Neils Maersk was an ineffective entry outwards for the purpose of computing the rate of customs duty of export on the goods in question. Only the subsequent entry outwards for vessel S.S. PXilas which actually carried these goods out of Indian territorial waters and effected the export of these goods was the only relevant and operative entry outwards and the rate of duty prevalent on the date of the said entry outwards for vessel S.S. PXilas was the only effective rate of duty payable on the export of these goods. Consequently it must be held that the respondent has made out no case for refund of Rs 4444.96 for which he lodged the claim." We may notice that a Constitution Bench of this Court in Gangadhar Narsingdas Agarwal v. P.S. Thrivikraman and Another [(1972) 3 SCC 475] opined that Section 16 of the 1962 Act speaks of the fictional date only in relation to the order of date of entry outwards of the vessel, but the issue with which we are concerned did not arise therein. The fundamental and statutory right of an exporter, in that case, were not sought to be taken away. Esajee Tayabally Kapasi (supra), therefore, has no application in the instant case. Reliance has also been placed on Union of India and Others v. M/s. C. Damani & Co. and Others [1980 (Supp) SCC 707] wherein the vires of Exports (Control) Fifteenth Amendment Order, 1979 prohibiting pre-ban commitments was in question. It was held that there was no ground to discredit the policy. The question raised therein, viz., the effect of failure to honour foreign contracts owing to change in law imposing ban on goods covered thereby whether would attract the plea of frustration of contract was not decided stating: "...This contention may have to be considered here or elsewhere, but, if we may anticipate our conclusion even here, this question is being skirted by us because the kismet of this case can be settled on other principles. The discipline of the judicial process forbids decisional adventures not necessary, even if desirable." **----NU Card starts---**We may, however, notice that M/s. C. Damani (supra) was explained by this Court in State Trading Corporation of India Ltd. v. Union of India and Others [1994 Supp (3) SCC 40]. It is not necessary for us to advert thereto as the said judgment has no application in the instant case. We are, however, not oblivious of the fact that in certain circumstances regulation may amount to prohibition. But, ordinarily the word "regulate" would mean to control or to adjust by rule or to subject to governing principles [See U.P. Cooperative Cane Unions Federations v. West U.P. Sugar Mills Association and Others [(2004) 5 SCC 430] whereas the word "prohibit" would mean to forbid by authority or command. The expressions "regulate" and "prohibit" inhere in them elements of restriction but it varies in degree. The element of restriction is inherent both in regulative measures as well as in prohibitive or preventive measures. We may, however, notice that this Court in State of U.P. and Others v. M/s. Hindustan Aluminium Corpn. and others [AIR 1979 SC 1459] stated the law thus: "It appears that a distinction between regulation and restriction or prohibition has always been drawn, ever since Municipal Corporation of the City of Toronto v. Virgo. Regulation promotes the freedom or the facility which is required to be regulated in the interest of all concerned, whereas prohibition obstructs or shuts off, or denies it to those to whom it is applied. The Oxford English Dictionary does not define regulate to include prohibition so that if it had been the intention to prohibit the supply, distribution, consumption or use of energy, the legislature would not have contended itself with the use of the word regulating without using the word prohibiting or some such word, to bring out that effect." **---NU Card ends--**However, in Talcher Municipality v. Talcher Regulated Market Committee and Another [(2004) 6 SCC 178], it was opined that regulation is a term which is capable of being interpreted broadly and it may amount to prohibition. [See also K. Ramanathan v. State of Tamil Nadu and another, AIR 1985 SC 660] The terms, however, indisputably would be construed having regard to the text and context in which they have been used. Section 3(2) of the 1992 Act uses prohibition, restriction and regulation. They are, thus, meant to be applied differently. Section 51 of the 1962 Act also speaks of prohibition. Thus, in terms of the 1992 Act as also the policy and the procedure laid down thereunder, the terms are required to be applied in different situations wherefor different orders have to be made or different provisions in the same order are required therefor.

## cp

#### Microgrid fails

Energy Collective, 5/10/12, Replacing nuclear with wind power: Could it be done?, theenergycollective.com/node/84553

Many people would like it to be theoretically possible to replace nuclear power with wind power, since the wind is a free resource. The way that I would like to approach the topic is to not discuss the source of power, but to discuss this question from the perspective of “intermittency.” Stating the question another way: Can an intermittent source replace a baseload power source for producing electricity? This question has nothing to do with how the electricity is generated, but everything to do with when the electricity is generated. The production of electricity involves understanding concepts such as capacity, capacity factor, and generation. These three concepts are often misunderstood and misused when comparing the generation of intermittent electricity with baseload generated electricity. It is sometimes useful to use a familiar analogy when explaining complicated topics. I will, therefore, use the automobile for this analogy, since many of us own a car and everyone is familiar with them. Capacity Here is the analogy: Suppose there is a car on the market that is very environmentally friendly. Its mileage is phenomenal! I call it a “super-green” car. This super-green car has the same horsepower as a conventional car. It will handle steep hills as well as a conventional car. It has the same 0 to 60 mph performance. The only difference is that when you try to start it in the morning, it will only start 25 percent of the time, and you can never predict on which day it will start. It runs, randomly, 25 percent of the time. Would you replace your conventional car with a super-green car to get you to work every day? To keep the analogy simple, let us assume that if the car starts on a particular day, it will also take you home at the end of the workday. If it doesn’t start on a particular day, however, it won’t start that day no matter how often you turn the starter key. To most people, the answer is obvious. Most of us would not hold on to a job very long if we randomly showed up at work only 25 percent of the time. So the answer is no, the super-green car cannot replace the conventional car. Horsepower is the equivalent of capacity in this analogy. An intermittent electrical power source with a capacity (or power capability when it is working) to generate 1000MW cannot replace a conventional power plant with a capacity of 1000MW. Even though the capacities are the same, the power plants are not equivalent. Yet capacity comparisons are made all the time, as if this somehow makes the power plants equivalent. They are not equivalent. Capacity factor Others would say that since the capacity factor is 25 percent (the car works 25 percent of the time), you would just need four cars to reliably get you to work every day. This is also not true, however. There is a chance that none of the cars will work on a particular day. As a matter of fact, this probability can be computed, if the probability of each car not working is independent of the other cars not working. It is 0.75 x 0.75 x 0.75 x 0.75 or (0.75)^4, which is equal to 32 percent. So if you owned four super-green cars, the probability of none of them working on a particular day is 32 percent. So, with four super-green cars, you get to work 68 percent of the time, which is better than 25 percent of the time, but it is still a long way from 100 percent of the time. Another problem with using capacity factor as an equalizing parameter is that there are times when more than one car will start. The extra cars, however, are of no value to you as far as getting to work is concerned. The extra working cars do not average out with the demand to get to work on time each day. They are working at the wrong time. Note that in the case of a wind farm, the probability of each turbine not working is not independent. If the wind doesn’t blow in a particular area, it will affect all wind turbines. The probabilities are not randomly independent. Therefore, wind farms must be in separate weather patterns, in order to significantly reduce the unavailable time. Generation A better equalizing parameter is generation. When the super-green car works, it generates highly economical miles. That parameter has its problems as well, however. The generation of economical miles can be increased simply by taking the long route to work. Those extra economical miles are of no value as far as getting to work is concerned. In the same way, generated electricity has no value unless there is a demand for it at the time that it is generated. This is because electricity has zero shelf-life. It must be consumed when it is generated. So, when generation cost comparisons are made between intermittent and baseload power sources, this presumes that the resulting electricity value is the same. This is actually not the case, because electricity generated when the demand for it is not certain does not have the same value as electricity that is generated when there is demand for it. There is no perfect equalization parameter when making comparisons between intermittent and baseload generated electricity. Capacity is by far the worst, next comes capacity factor, and the best is generation, but it is not perfect. Conclusion So, the conclusion is that intermittently generated electricity cannot replace baseload generation. Just like there is a chance that none of the super-green cars are working on a particular day, there is also a chance that no electricity is generated by an intermittent source. Hence, all the conventional power sources are still needed. Intermittent power sources can be of value, however, because they do save fuel in conventional power plants. But the economics are usually not very good at today’s fuel prices. In the car analogy, I compute that my 20-mile round-trip commute to work would save me about two gallons of gas a month if the super-green car gets double the mileage of my conventional car. At $4 per gallon, that is $8 per month saving. It is obvious that, from an economic point of view, this saving is nowhere near the hundreds of dollars required per month to own an extra car. Similarly, I wrote an article explaining that wind farms cannot be justified on an economic basis, except in Hawaii, where expensive oil is used to generate electricity. But perhaps using intermittent power plants can be justified environmentally. Perhaps not burning fossil fuels is worth the environmental benefit of not releasing as much greenhouse gases. Also, the fossil resource can be saved for other uses such as plastics. That argument breaks down, however, when the baseload generator is nuclear. Nuclear power does not generate greenhouse gases during operation. Saving the uranium for other uses is not applicable, because uranium has no other commercial uses. What exactly would we be saving it for? So, to answer the general question, can wind power replace nuclear? The answer is clearly no. No technology is perfect, and there is always some impact in everything we do. Nuclear has the capability to meet the electrical needs for humanity for a millennia. That is a very compelling reason to use it, versus using a technology that only works intermittently and requires keeping all the conventional generators that we already have.

Accomodative policy creates a bubble-crisis coming

Leong 3-15-13

George, Fed's Easy Money to Cause Next Financial Meltdown. Senior Editor at Lombardi Financial and an Analyst with Globe Inormation Services

<http://www.silverbearcafe.com/private/03.13/meltdown.html>

The Federal Reserve may be responsible for the biggest financial meltdown yet to come. In fact, this meltdown could be even bigger than the subprime mortgage crisis in 2008. Let me explain. We all know the Federal Reserve has created an artificial economy that has been built on the availability of easy access to cheap money due to near-zero interest rates. There is no argument here. Via its aggressive quantitative easing programs, the Federal Reserve has produced an economy that is dependent on cheap capital. Some would argue the Federal Reserve didn't have a choice; if they didn't introduce monetary policy, the housing market and banking system may have collapsed. I agree to that extent, but with the economy now in recovery, you kind of wonder why the Federal Reserve continues to allow the flow of easy money. Recently at its January Federal Open Market Committee (FOMC) meeting, the Federal Reserve suggested that it would have to review the possible stoppage or slowing of its $85.0 billion in monthly bond purchases. The market reacted by selling stocks. Federal Reserve Chairman Ben Bernanke then came out and said that the central bank was committed to its monthly bond buying as long as the economy and employment remain fragile. So which is it? The Federal Reserve needs to really think about reining in its easy monetary policy and reducing the amount of the M2 (all money in circulation, plus savings deposits, time-related deposits, and market-money funds) money supply in the system. Here's the dilemma: The climate of historically low interest rates has driven a false sense of comfort. Consumers are buying more due to the low financing charges. Whether it's a home, furniture, vehicle, computer, or other non-perishable good or service, the incentive of low interest rates has resulted in an economy that could be in trouble once interest rates ratchet higher—and they will. According to the Federal Reserve Bank of New York, aggregate consumer debts increased by $31.0 billion in the fourth quarter, which is not a big change; but consider the amount of consumer debt at the end of 2012—it was an astounding $11.3 trillion. (Source: "Quarterly Report on Household Debt and Credit: February 2013," Federal Reserve Bank of New York web site, last accessed March 13, 2013.) The amount is below the record $12.7 trillion in the third quarter of 2008, but it's still high and extremely vulnerable to higher interest rates, which will have an impact on consumer spending and gross domestic product (GDP) growth. Retailers could feel the pinch again. There has been improvement in the housing market, but another 210,000 homeowners were foreclosed on in the fourth quarter. (Source: Ibid.) Just imagine when rates move higher? I'm still wary about the current run-up in housing starts, and I advise caution. The news isn't good for students, either. The amount of student loans outstanding was a staggering $966 billion at the end of 2012. (Source: Ibid.) A concern is the11.7% of students who are delinquent on student loan payments over 90 days late, and this number is rising. Of course, the lack of jobs for graduates is not helping.

Easy money is disastrous

Leong 3-25-13

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http://seekingalpha.com/instablog/4320291-smithpaul/1687581-who-cares-about-america-s-financial-mess-lets-just-print-more-money

Money printing by the Federal Reserve will continue into the near future. And while it will help America avert a recession, the flow of easy money will be disastrous over the longer term. The reality is that the current bull market and rebound in the housing sector that has made some people very rich is a by-product of the Federal Reserve, as the central bank has built this artificial economy in America that’s driven by the availability of cheap money. Recall the subprime mortgage crisis in 2008 was also driven largely by cheap money. The problem is that the Federal Reserve had some tough decisions to make. Either let the country revert back to a possible recession or offer loose monetary policy to drive spending. Of course, the Federal Reserve only really had one choice. While I agree with the Federal Reserve, with the economy now in recovery, you kind of have to wonder why the Federal Reserve continues to allow the flow of easy money; based on the central bank’s policy statement from its Federal Open Market Committee (FOMC) meeting last Wednesday, the cheap money will continue. The Federal Reserve will continue to buy $85.0 billion a month in bonds, adding to its debt in the process. The Federal Reserve said it would maintain its interest rates at record-low levels until the country’s unemployment rate falls to 6.5% from the 7.7% in February. However, the Federal Reserve predicts this will not occur until sometime in 2015, so that’s another two years of easy money and the building up of massive debt. In reality, achieving an unemployment rate of 6.5% may not happen until even later, based on current jobs creation. (Read “What the Government Doesn’t Want You to Know About Jobs Creation.”) According to the Federal Reserve, the unemployment rate will fall to 7.3%–7.5% this year, 6.7%–7.0% in 2014, and 6.0%–6.5% in 2015. The longer-run projection is 5.2%–6.0%. (Source: Board of Governors of the Federal Reserve System web site, last accessed March 22, 2013.) Another problem is that the low rates will drive consumer debt higher, given the propensity to spend. According to the Federal Reserve Bank of New York, aggregate consumer debt increased by $31.0 billion in the fourth quarter, which is not a big change; however, consider the amount of consumer debt at the end of 2012 was an astounding $11.3 trillion. (Source: “Quarterly Report on Household Debt and Credit,” Federal Reserve Bank of New York web site, February 2013.) The amount is below the record $12.7 trillion in the third quarter of 2008, but it’s still high and extremely vulnerable to higher interest rates.

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#### Competitiveness exists, our challengers rely on it, and ideology’s key

**Lodge 9**, (George C., “ Ideology and national competitiveness,” Journal of Management Issues, December 22)

First, there is such a thing as a competitive nation;

Second, in this clay and age, ideology is perhaps a nation's most important competitive advantage; and

Third, a communitarian ideology is and will be more competitive than an individualistic one that ideology gives high priority to competitiveness; if it is flexible, capable of adapting and adjusting to the exigencies of the real world; and if institutions such as government and business are efficiently aligned with it.

This argument rests on conceptions of the roles and relationships of government and business which are quite contrary to the beliefs of traditional economists, such as those who currently advise the President of the United States. For them, there is no such thing as a competitive nation; nations do not compete. Firms compete against firms with governments standing on the sidelines, blowing the whistle now and then, but never acting as players, certainly not as a coach. And for the traditionalists, everyone is better off if this competition occurs in a world characterized by free trade, free markets, and flee enterprise; firms benefiting from what the economists call the comparative advantage of their home base; comparative advantage meaning essentially that with which God has endowed the nation.

Textbooks repeat the famous example of David Ricardo. Portugal, endowed with sunshine, was supposed to grow grapes and make wine. Britain, endowed by God with nobody knows quite what, was supposed to make sheep, which in turn made wool, which was to be converted into textiles. And, so said Ricardo, in the best of all possible worlds, it was Portuguese wine for British textiles. Needless to say, Ricardo was English, not Portuguese. And, at the time in which he wrote, textiles was the high value-added, high-income, high-profit, high-wage industry, comparable to semiconductors and computers today (Scott, 1984).

Many of America's competitors have shown this theory to be wrong. You can live on a rock in the fog and be fiercely competitive if as a nation you have the will, the purpose, the discipline, the consensus, the coherence, and the theory.

And how do you measure a nation's competitiveness? You look at its share of world markets, its share of world gross national product, and its ability to earn--not borrow--a rising standard of living for its people. Since a rising living standard means higher wages and less pollution, competitiveness requires that a country move up the ladder of technology, gaining share in the high value-added sectors of tomorrow. This is the story of Korea, Japan, and Singapore, among other countries.

Japan in the early 1960s had essentially no computer industry. Traditional theory would have said that Japan should buy computers from the United States and make the most of its cheap labor force. Japan said no; that is the way to stagnation. We will protect our home market and concentrate our resources to achieve competitiveness, with government and business acting in concert to promote the national goal of global competitiveness. The same theory and practice was of course applied to many other sectors-machine tools, robotics, semiconductors--and it is being applied today to biotechnology, superconductivity, advanced materials, telecommunications, and more.

The fact is, as my colleague Bruce Scott has demonstrated, that nations have strategies; and competitive nations have strategies that make them competitive. These strategies are characterized by high savings and high investment with low capital costs in selected industries, which are chosen by government and business as targets for national endeavor. The strategies are backed by a strong consensus among the people and between managers and managed, and they are complimented by trade policies which provide encouragement to the designated winners but do not protect uncompetitive losers (Scott, 1984: Chapters 1-3; Thurow, 1992).

The strategies of uncompetitive nations like the United States are very nearly the opposite: low savings, high consumption, low investment, incoherent goals, laissez-faire theory, adversarial relations, industry fragmentation, high capital costs, and deteriorating education with incoherent purposes. In the case of the United States, competitiveness has been taken for granted; the nation's purpose was aimed at numerous goals, foreign and domestic. The foreign ones have been largely met: Japan and Germany have been restored, to say the least, and the USSR has crumbled. The domestic ones are contradictory: low taxes, environmental purity, education, welfare, high living standards, less crime, and SO on.

So there are economic winners in the world today who derive their comparative advantage from a particular brand of ideology which I call communitarian, and the United States owes much of its difficulty to the lingering effects of an eroding individualism (Lodge, 1980).

The challenge for the United States is to continue its transition from individualism to communitarianism and to arrive at a synthesis which enables it to make the most of itself (Lodge, 1990).

IDEOLOGY: A FRAMEWORK FOR UNDERSTANDING

Intensifying global competition has been shaping the formation of nations. Especially in the West, global competition has been forcing internal changes upon government, business, and labor. To provide a framework for understanding these strains, let me suggest a hypothesis: Each nation has an ideology, perhaps several. These are a set of beliefs and assumptions about values that the nation holds in order to justify and make legitimate the actions and purpose of its institutions. A nation is successful when its ideology is coherent and adaptable, enabling it to define and attain its goals, and when there is the least distance between the prevailing ideology and the actual practice of the country's institutions.

What is ideology? How can its analysis broaden the understanding of decision makers?

THE CONCEPT OF IDEOLOGY

Ideology is the collection of ideas that a community uses to make values explicit in the real world.

The term "values" in this definition refers to timeless, universal, noncontroversial notions that virtually every community everywhere has always cherished: survival, for example, or justice, economy, self-fulfillment or self-respect. As I use the term, values are held by communities rather than by individual persons.

The phrase "real world" is the collection of phenomena, facts, events, insights, institutions, and forces that affect the community from within and from without: the surrounding reality, the actual environment.

Ideology connects the two: values and real world (see Figure I). Ideology gives values institutional vitality, makes them live in a particular place at a particular time. In ancient Egypt, for example, the values "justice" and "self-fulfillment" involved most inhabitants in lugging stones to glorify the god-king, motivation coming importantly from a whip across the laborer's back. Ideologically, the community was organized around the ideas of a theocratic hierarchy, an imposed consensus kept in place by force, and an extensive set of duties with a few rights of membership. A variety of contextual phenomena, including strong policemen and the need to keep the gods happy in order to obtain rain, sustained the ideology for some thousands of years.

[FIGURE 1 OMITTED]

This definition of "ideology" elaborates on, but nevertheless follows that of the French philosopher, Antoine Destutt de Tracy, who invented the word in 1801 to describe the study of those ideas that have a formative effect on society. This definition is quite different from that of Karl Marx and others for whom ideology was a set of beliefs used by the ruling class to obscure reality, with the sole purpose of perpetuating domination by that class. By my definition, the concept of ideology, may be a weapon of propaganda, but it is also an analytic tool for the study of societies in the tradition of Max Weber, who used the concept to trace the effects of religion on the rise of individualism, and of Karl Mannheim, who developed it as a method of social research.

Ideology is a dynamic structure, a bridge by which these timeless values are connected to the surrounding reality in various cultures at different points in space and time. In the 1980s, Japan was relatively more successful economically than the USSR and the United States because its ideology conformed better with reality and thus supported the actions of government, business, and labor as they competed in the world. Japan's ideology arose, as did that of the United States and the USSR, from its efforts to connect certain values to its surrounding reality. A collection of small infertile islands with a population of some 120 million people, Japan is virtually totally dependent on what has often been a hostile world for the vital natural resources upon which its survival depends. Naturally, the ideology of Japan, the framework of ideas it uses to make values explicit and to justify its institutions, is different from that which took root in nineteenth century America, where a sparse population was trying to tame a wilderness and develop abundant resources. Thus, in Japan, attitudes about the role of government, the role of business, the relationship between the two, the role of trade unions, the means to self-fulfillment and self respect for the individual in the family, in the village, in the firm, and in the nation are all different from corresponding attitudes in the United States.

If a community is to function effectively, its ideology requires scrutiny from time to time so that beliefs and practice can be made more coherent with one another.

The relationship between ideology and practice generally follows a fairly standard pattern over a period of time. During a certain interval, institutional practice conforms to the prevailing ideology. Then changes in the real world induce or compel the institutions to behave differently. At that point, practice begins to depart from ideology. After another interval, institutional practice differs markedly from what ideology declares: the old hymns may be sung but they are not practiced. Ideological schizophrenia sets in: the new practice may evoke a new ideology to justify it, but loyalty to the old ideology discourages it being articulated. There is a gap between institutional practice and ideology--a legitimacy gap (see Figure II). As it widens, two forms of pressure are increasingly brought to bear on leaders. Some of the community seek to haul the institutions back into line with the traditional ideology. Others argue for a new ideology to justify the institution's actual practice. The feature of ideology that bo0th excites and exasperates those who study it is that frequently an old ideology tends to linger on, uninspected, while institutions depart from it in many pragmatic ways. People do not practice what they preach, and they find it difficult to preach what they practice--at least immediately.

**The status quo is structurally improving**

Indur **Goklany 10**, policy analyst for the Department of the Interior – phd from MSU, “Population, Consumption, Carbon Emissions, and Human Well-Being in the Age of Industrialization (Part III — Have Higher US Population, Consumption, and Newer Technologies Reduced Well-Being?)”, April 24, <http://www.masterresource.org/2010/04/population-consumption-carbon-emissions-and-human-well-being-in-the-age-of-industrialization-part-iii-have-higher-us-population-consumption-and-newer-technologies-reduced-well-being/#more-9194>

In my previous post I showed that, notwithstanding the Neo-Malthusian worldview, human well-being has advanced globally since the start of industrialization more than two centuries ago, despite massive increases in population, consumption, affluence, and carbon dioxide emissions. In this post, I will focus on long-term trends in the U.S. for these and other indicators. Figure 1 shows that despite several-fold increases in the use of metals and synthetic organic chemicals, and emissions of CO2 stoked by increasing populations and affluence, life expectancy, the single best measure of human well-being, increased from 1900 to 2006 for the US. Figure 1 reiterates this point with respect to materials use. These figures indicate that since 1900, U.S. population has quadrupled, affluence has septupled, their product (GDP) has increased 30-fold, synthetic organic chemical use has increased 85-fold, metals use 14-fold, material use 25-fold, and CO2 emissions 8-fold. Yet life expectancy advanced from 47 to 78 years. Figure 2 shows that during the same period, 1900–2006, emissions of air pollution, represented by sulfur dioxide, waxed and waned. Food and water got safer, as indicated by the virtual elimination of deaths from gastrointestinal (GI) diseases between 1900 and 1970. Cropland, a measure of habitat converted to human uses — the single most important pressure on species, ecosystems, and biodiversity — was more or less unchanged from 1910 onward despite the increase in food demand. For the most part, life expectancy grew more or less steadily for the U.S., except for a brief plunge at the end of the First World War accentuated by the 1918-20 Spanish flu epidemic. As in the rest of the world, today’s U.S. population not only lives longer, it is also healthier. The disability rate for seniors declined 28 percent between 1982 and 2004/2005 and, despite quantum improvements in diagnostic tools, major diseases (e.g., cancer, and heart and respiratory diseases) now occur 8–11 years later than a century ago. Consistent with this, data for New York City indicate that — despite a population increase from 80,000 in 1800 to 3.4 million in 1900 and 8.0 million in 2000 and any associated increases in economic product, and chemical, fossil fuel and material use that, no doubt, occurred —crude mortality rates have declined more or less steadily since the 1860s (again except for the flu epidemic). Figures 3 and 4 show, once again, that whatever health-related problems accompanied economic development, technological change, material, chemical and fossil fuel consumption, and population growth, they were overwhelmed by the health-related benefits associated with industrialization and modern economic growth. This does not mean that fossil fuel, chemical and material consumption have zero impact, but it means that overall benefits have markedly outweighed costs. The reductions in rates of deaths and diseases since at least 1900 in the US, despite increased population, energy, and material and chemical use, belie the Neo-Malthusian worldview. The improvements in the human condition can be ascribed to broad dissemination (through education, public health systems, trade and commerce) of numerous new and improved technologies in agriculture, health and medicine supplemented through various ingenious advances in communications, information technology and other energy powered technologies (see here for additional details). The continual increase in life expectancy accompanied by the decline in disease during this period (as shown by Figure 2) indicates that the new technologies reduced risks by a greater amount than any risks that they may have created or exacerbated due to pollutants associated with greater consumption of materials, chemicals and energy, And this is one reason why the Neo-Malthusian vision comes up short. It dwells on the increases in risk that new technologies may create or aggravate but overlooks the larger — and usually more certain — risks that they would also eliminate or reduce. In other words, it focuses on the pixels, but misses the larger picture, despite pretensions to a holistic worldview.

#### War turns structural violence

Bulloch 8

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But the idea that poverty and peace are directly related presupposes that wealth inequalities are – in and of themselves – unjust, and that the solution to the problem of war is to alleviate the injustice that inspires conflict, namely poverty. However, it also suggests that poverty is a legitimate inspiration for violence, otherwise there would be no reason to alleviate it in the interests of peace. It has become such a commonplace to suggest that poverty and conflict are linked that it rarely suffers any examination. To suggest that war causes poverty is to utter an obvious truth, but to suggest the opposite is – on reflection – quite hard to believe. War is an expensive business in the twenty-first century, even asymmetrically. And just to examine Bangladesh for a moment is enough at least to raise the question concerning the actual connection between peace and poverty. The government of Bangladesh is a threat only to itself, and despite 30 years of the Grameen Bank, Bangladesh remains in a state of incipient civil strife. So although Muhammad Yunus should be applauded for his work in demonstrating the efficacy of micro-credit strategies in a context of development, it is not at all clear that this has anything to do with resolving the social and political crisis in Bangladesh, nor is it clear that this has anything to do with resolving the problem of peace and war in our times. It does speak to the Western liberal mindset – as Geir Lundestad acknowledges – but then perhaps this exposes the extent to which the Peace Prize itself has simply become an award that reflects a degree of Western liberal wish-fulfilment. It is perhaps comforting to believe that poverty causes violence, as it serves to endorse a particular kind of concern for the developing world that in turn regards all problems as fundamentally economic rather than deeply – and potentially radically – political.

#### Their conception of violence is reductive and can’t be solved

Boulding 77

Twelve Friendly Quarrels with Johan Galtung

Author(s): Kenneth E. BouldingReviewed work(s):Source: Journal of Peace Research, Vol. 14, No. 1 (1977), pp. 75-86Published

Kenneth Ewart Boulding (January 18, 1910 – March 18, 1993) was an economist, educator, peace activist, poet, religious mystic, devoted Quaker, systems scientist, and interdisciplinary philosopher.[1][2] He was cofounder of General Systems Theory and founder of numerous ongoing intellectual projects in economics and social science.

He graduated from Oxford University, and was granted United States citizenship in 1948. During the years 1949 to 1967, he was a faculty member of the University of Michigan. In 1967, he joined the faculty of the University of Colorado at Boulder, where he remained until his retirement.

Finally, we come to the great Galtung metaphors of 'structural violence' 'and 'positive peace'. They are metaphors rather than models, and for that very reason are suspect. Metaphors always imply models and metaphors have much more persuasive power than models do, for models tend to be the preserve of the specialist. But when a metaphor implies a bad model it can be very dangerous, for it is both persuasive and wrong. The metaphor of structural violence I would argue falls right into this category. The metaphor is that poverty, deprivation, ill health, low expectations of life, a condition in which more than half the human race lives, is 'like' a thug beating up the victim and 'taking his money away from him in the street, or it is 'like' a conqueror stealing the land of the people and reducing them to slavery. The implication is that poverty and its associated ills are the fault of the thug or the conqueror and the solution is to do away with thugs and conquerors. While there is some truth in the metaphor, in the modern world at least there is not very much. Violence, whether of the streets and the home, or of the guerilla, of the police, or of the armed forces, is a very different phenomenon from poverty. The processes which create and sustain poverty are not at all like the processes which create and sustain violence, although like everything else in 'the world, everything is somewhat related to everything else. There is a very real problem of the structures which lead to violence, but unfortunately Galitung's metaphor of structural violence as he has used it has diverted attention from this problem. Violence in the behavioral sense, that is, somebody actually doing damage to somebody else and trying to make them worse off, is a 'threshold' phenomenon, rather like the boiling over of a pot. The temperature under a pot can rise for a long time without its boiling over, but at some 'threshold boiling over will take place. The study of the structures which underlie violence are a very important and much neglected part of peace research and indeed of social science in general. Threshold phenomena like violence are difficult to study because they represent 'breaks' in the systenm rather than uniformities. Violence, whether between persons or organizations, occurs when the 'strain' on a system is too great for its 'strength'. The metaphor here is that violence is like what happens when we break a piece of chalk. Strength and strain, however, especially in social systems, are so interwoven historically that it is very difficult to separate them. The diminution of violence involves two possible strategies, or a mixture of the two; one is Ithe increase in the strength of the system, 'the other is the diminution of the strain. The strength of systems involves habit, culture, taboos, and sanctions, all these 'things which enable a system to stand lincreasing strain without breaking down into violence. The strains on the system 'are largely dynamic in character, such as arms races, mutually stimulated hostility, changes in relative economic position or political power, which are often hard to identify. Conflicts of interest 'are only part 'of the strain on a system, and not always the most important part. It is very hard for people ito know their interests, and misperceptions of 'interest take place mainly through the dynamic processes, not through the structural ones. It is only perceptions of interest which affect people's behavior, not the 'real' interests, whatever these may be, and the gap between percepti'on and reality can be very large and resistant to change. However, what Galitung calls structural violence (which has been defined 'by one unkind commenltator as anything that Galitung doesn't like) was originally defined as any unnecessarily low expectation of life, on that assumption that anybody who dies before the allotted span has been killed, however unintentionally and unknowingly, by somebody else. The concept has been expanded to include all 'the problems of poverty, destitution, deprivation, and misery. These are enormously real and are a very high priority for research and action, but they belong to systems which are only peripherally related to 'the structures whi'ch produce violence. This is not rto say that the cultures of violence and the cultures of poverty are not sometimes related, though not all poverty cultures are cultures of violence, and certainly not all cultures of violence are poverty cultures. But the dynamics lof poverty and the success or failure to rise out of it are of a complexity far beyond anything which the metaphor of structural violence can offer. While the metaphor of structural violence performed a service in calling attention to a problem, it may have d'one a disservice in preventing us from finding the answer.

#### The system’s sustainable

Kaletsky ’10

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The world did not end. Despite all the forebodings of disaster in the 2007– 09 financial crisis, the first decade of the twenty-first century passed rather uneventfully into the second. The riots, soup kitchens, and bankruptcies predicted by many of the world’s most respected economists did not materialize— and no one any longer expects the global capitalist system to collapse, whatever that emotive word might mean. Yet the capitalist system’s survival does not mean that the precrisis faith in the wisdom of financial markets and the efficiency of free enterprise will ever again be what it was before the bankruptcy of Lehman Brothers on September 15, 2008. A return to decent economic growth and normal financial conditions is likely by the middle of 2010, but will this imply a return to business as usual for politicians, economists, and financiers? Although globalization will continue and many parts of the world will gradually regain their prosperity of the precrisis period, the traumatic effects of 2007– 09 will not be quickly forgotten. And the economic costs will linger for decades in the debts squeezing taxpayers and government budgets, the disrupted lives of the jobless, and the vanished dreams of homeowners and investors around the world. For what collapsed on September 15, 2008, was not just a bank or a financial system. What fell apart that day was an entire political philosophy and economic system, a way of thinking about and living in the world. The question now is what will replace the global capitalism that crumbled in the autumn of 2008. The central argument of this book is that global capitalism will be replaced by nothing other than global capitalism. The traumatic events of 2007– 09 will neither destroy nor diminish the fundamental human urgesthat have always powered the capitalist system— ambition, initiative, individualism, the competitive spirit. These natural human qualities will instead be redirected and reenergized to create a new version of capitalismthat will ultimately be even more successful and productive than the system it replaced. To explain this process of renewal, and identify some of the most important features of the reinvigorated capitalist system, is the ambition of this book. This transformation will take many years to complete, but some of its consequences can already be discerned. With the benefit of even a year’s hindsight, it is clear that these consequences will be different from the nihilistic predictions from both ends of the political spectrum at the height of the crisis. On the Left, anticapitalist ideologues seemed honestly to believe that a few weeks of financial chaos could bring about the disintegration of a politico-economic system that had survived two hundred years of revolutions, depressions, and world wars. On the Right, free-market zealots insisted that private enterprise would be destroyed by government interventions that were clearly necessary to save the system— and many continue to believe that the crisis could have been resolved much better if governments had simply allowed financial institutions to collapse. A balanced reassessment of the crisis must challenge both left-wing hysteria and right-wing hubris. Rather than blaming the meltdown of the global financial system on greedy bankers, incompetent regulators, gullible homeowners, or foolish Chinese bureaucrats, this book puts what happened into historical and ideological perspective. It reinterprets the crisis in the context of the economic reforms and geopolitical upheavals that have repeatedly transformed the nature of capitalism since the late eighteenth century, most recently in the Thatcher-Reagan revolution of 1979– 89. The central argument is that capitalism has never been a static system that follows a fixed set of rules, characterized by a permanent division of responsibilities between private enterprise and governments. Contrary to the teachings of modern economic theory, no immutable laws govern the behavior of a capitalist economy. Instead, capitalism is an adaptive social system that mutates and evolves in response to a changing environment. When capitalism is seriously threatened by a systemic crisis, a new version emerges that is better suited to the changing environment and replaces the previously dominant form. Once we recognize that capitalism is not a static set of institutions, but an evolutionary system that reinvents and reinvigorates itself through crises, we can see the events of 2007– 09 in another light: as the catalyst for the fourth systemic transformation of capitalism, comparable to the transformations triggered by the crises of the 1970s, the crises of the 1930s, and the Napoleonic Wars of 1803– 15. Hence the title of this book.

**The system’s resilient and the alt fails – there is no crisis**

Gideon **Rose 12**, Editor of Foreign Affairs, “Making Modernity Work”, Foreign Affairs, January/February

The central question of modernity has been how to reconcile capitalism and mass democracy, and since the postwar order came up with a good answer, it has managed to weather all subsequent challenges. The upheavals of the late 1960s seemed poised to disrupt it. But despite what activists at the time thought, they had little to offer in terms of politics or economics, and so their lasting impact was on social life instead. This had the ironic effect of stabilizing the system rather than overturning it, helping it live up to its full potential by bringing previously subordinated or disenfranchised groups inside the castle walls. The neoliberal revolutionaries of the 1980s also had little luck, never managing to turn the clock back all that far. **All potential alternatives** in the developing world, meanwhile, **have proved to be either dead ends or temporary detours from the beaten path**. The much-ballyhooed "rise of the rest" has involved not the discrediting of the postwar order of Western political economy but its reinforcement: the countries that have risen have done so by embracing global capitalism while keeping some of its destabilizing attributes in check, and have liberalized their polities and societies along the way (and will founder unless they continue to do so). Although the structure still stands, however, it has seen better days. Poor management of public spending and fiscal policy has resulted in unsustainable levels of debt across the advanced industrial world, even as mature economies have found it difficult to generate dynamic growth and full employment in an ever more globalized environment. Lax regulation and oversight allowed reckless and predatory financial practices to drive leading economies to the brink of collapse. Economic inequality has increased as social mobility has declined. And a loss of broad-based social solidarity on both sides of the Atlantic has eroded public support for the active remedies needed to address these and other problems. Renovating the structure will be a slow and difficult project, the cost and duration of which remain unclear, as do the contractors involved. Still, at root, **this is not an ideological issue**. The question is not what to do but how to do it--how, under twenty-first-century conditions, to rise to the challenge Laski described, making the modern political economy provide enough solid benefit to the mass of men that they see its continuation as a matter of urgency to themselves. The old and new articles that follow trace this story from the totalitarian challenge of the interwar years, through the crisis of liberalism and the emergence of the postwar order, to that order's present difficulties and future prospects. Some of our authors are distinctly gloomy, and one need only glance at a newspaper to see why. But remembering the far greater obstacles that have been overcome in the past, **optimism would seem the better long-term bet**.

**The alt fails**

**Kliman**, professor of economics – Pace University, **‘4**

(Andrew, “Alternatives to Capitalism: What Happens After the Revolution?” http://akliman.squarespace.com/writings/)

I. Concretizing the Vision of a New Human Society We live at a moment in which it is harder than ever to articulate a liberatory alternative to capitalism. As we all know, the collapse of state-capitalist regimes that called themselves “Communist,” as well as the widespread failures of social democracy to remake society, have given rise to a widespread acceptance of Margaret Thatcher’s TINA – the belief that “there is no alternative.” Yet the difficulty in articulating a liberatory alternative is not mostly the product of these events. It is an inheritance from the past. To what extent has such an alternative ever been articulated? There has been a lot of progress – in theory and especially in practice – on the problem of forms of organization – but new organizational forms by themselves are not yet an alternative. A great many leftists, even revolutionaries, did of course regard nationalized property and the State Plan, under the control of the “vanguard” Party, as socialism, or at least as the basis for a transition to socialism. But even before events refuted this notion, it represented, at best, an evasion of the problem. It was largely a matter of leftists with authoritarian personalities subordinating themselves and others to institutions and power with a **blind faith** that substituted for thought. How such institutions and such power would result in human liberation was never made clear. **Vague references to “transition” were used to wave the problem away**. Yet as Marxist-Humanism has stressed for more than a decade, the anti-Stalinist left is also partly responsible for the crisis in thought. It, too, failed to articulate a liberatory alternative, offering in place of private- and state-capitalism little more than what Hegel (Science of Logic, Miller trans., pp. 841-42) called “the **empty negative** … a **presumed absolute**”: The impatience that insists merely on getting beyond the determinate … and finding itself immediately in the absolute, has before it as cognition nothing but the empty negative, the abstract infinite; in other words, a presumed absolute, that is presumed because it is not posited, not grasped; grasped it can only be through the mediation of cognition … . The question that confronts us nowadays is whether we can do better. Is it possible to make the vision of a new human society more concrete and determinate than it now is, through the mediation of cognition? According to a long-standing view in the movement, it is not possible. The character of the new society can only be concretized by practice alone, in the course of trying to remake society. Yet if this is true, we are faced with a viciouscircle from which there seems to be no escape, because acceptance of TINA is creating barriers in practice. In the **perceived** absence of an alternative, practical struggles have proven to be **self-limiting at best**. They stop short of even trying to remake society totally – and for good reason. As Bertell Ollman has noted (Introduction to Market Socialism: The Debate among Socialists, Routledge, 1998, p. 1), “People who believe [that there is no alternative] will put up with almost any degree of suffering. Why bother to struggle for a change that cannot be? … people [need to] have a good reason for choosing one path into the future rather than another.” Thus the reason of the masses is posing a new challenge to the movement from theory. When masses of people require reasons before they act, a new human society surely cannot arise through spontaneous action alone. And **exposing the ills of** existing **society does not provide sufficient reason for action when what is at issue is the very possibility of an alternative**. If the movement from theory is to respond adequately to the challenge arising from below, it is necessary to abandon the presupposition – and it seems to me to be no more than a presupposition – that the vision of the new society cannot be concretized through the mediation of cognition**.** We need to take seriously Raya Dunayevskaya’s (Power of Negativity [PON], p. 184) claim in her Hegel Society of America paper that “There is no trap in thought. Though it is finite, it breaks through the barriers of the given, reaches out, if not to infinity, surely beyond the historic moment” (RD, PON, p. 184). This, too, is a presupposition that can be “proved” or “disproved” **only in the light of the results it yields**. In the meantime, the challenges from below require us to proceed on its basis.

#### Specificity matters – rejecting neoliberalism as a monolithic entity undermines the alt

Duffy and Moore 10

Article: Neoliberalizing nature? Elephants as imperfect commodities Author: Duffy, R Journal: Antipode ISSN: 0066-4812 Date: 2010 Volume: 42 Issue: 3 Page: 742

Note: from 1 September 2012 I take up the post of Professor of Conservation Politics at the Durrell Institute of Conservation Ecology (DICE) in the School of Anthropology and Conservation, University of Kent.

I am Professor of International Politics, and I held posts at Edinburgh University and Lancaster University before joining Manchester in 2005. I take a deliberately interdisciplinary approach to understanding conservation; my work is located at the intersection between international relations, geography and sociology. My work examines the debates on global environmental governance, especially the roles of international NGOs, international treaties, international financial institutions and epistemic communities. I am particularly interested in how global environmental management regimes play out on the ground, how they are contested, challenged and resisted by their encounter at the local level. I focus on wildlife conservation, tourism and illicit trading networks to understand the local level complexities of global environmental management. I have undertaken a number of ESRC funded research projects on Peace Parks, gemstone mining and national parks,and on ecotourism (more details are under 'research interests'. My most recent book, Nature Crime: How We're Getting Conservation Wrong (Yale University Press, 2010) examines how global dynamics of wealth and poverty shape conservation outcomes. More information is on my personal wesbite 'Conservation Politics' <http://conservationpolitics.wordpress.com/>

However, it is critically important not to reify neoliberalism and ascribe it a greater level of coherence and dominance than it really deserves (Bakker 2005; Castree 2008a; Brenner and Theodore 2002; Mansfield 2004; McCarthy and Prudham 2004). Instead it is important to interrogate how neoliberalism plays out “on the ground”, to probe its complexities, unevenness and messiness (see Peck and Tickell 2002). In this paper we concentrate on comparing the practices of neoliberalism in order to draw out these messy entanglements; this demonstrates how neoliberalism can be challenged, resisted and changed by its encounter with nature (Bakker 2009; Castree 2008b:161). Therefore, we do not rehearse the well worn debates on definitions of neoliberalism, but rather take up the challenge of comparative research on “actually existing neoliberalisms”, which involves engaging with contextual embeddedness in order to complicate neat theoretical debates. As Brenner and Theodore (2002:356–358) suggest, to understand actually existing neoliberalism we must explore the path-dependent, contextually specific interactions between inherited regulatory landscapes and emergent forms of neoliberalism. As such, the neat lines and models generated via theoretical debates can be traced, refined, critiqued and challenged through engagement with specific case studies (Bakker 2009; Castree 2008b).

## 2ac politics

#### Plan is DC Court of Appeals

Administrative Conference of the U.S., 1976, Judicial Review Under the Clean Air Act and Federal Water Pollution Control Act, http://www.acus.gov/wp-content/uploads/2012/08/76-4-ss.pdf

1. Section 509(b) of the FWPCA provides that all standards promulgated under it by the Environmental Protection Agency, including national standards, are to be reviewed in the United States Court of Appeals for a circuit in which the petitioner resides or transacts business. Under section 307(b) of the Clean Air Act, on the other hand, certain nationally applicable standards are to be reviewed only in the Court of Appeals for the District of Columbia Circuit, but the EPA's actions in approving or promulgating state implementation plans are reviewable only "in the United States Court of Appeals for the appropriate circuit." Thus the FWPCA provides for a decentralized review of national standards, whereas the Clean Air Act requires that analogous standards be reviewed only in the D.C. Circuit. This inconsistency in approach should be resolved; the advantages of expeditious and authoritative review of all national standards in the D.C. Circuit suggest that it is the FWPCA's venue provision which should be amended. All national standards under the FWPCA should be made reviewable in the D.C. Circuit. Review of all other regulations, standards, and determinations that are reviewable in the courts of appeals under the FWPCA should be in the circuit containing the affected state or facility. These amendments would entirely supplant the present provisions for review in the circuit in which the petitioner resides or transacts business.

#### That avoids the link

Keith Whittington, Princeton Politics Professor, 2005, Interpose Your Friendly Hand: Political Supports for the Exercise of Judicial Review by the United States Supreme Court, The American Political Science Review, Nov., (99)4,

There are some issues that politicians cannot easily handle. For individual legislators, their constituents may be sharply divided on a given issue or overwhelmingly hostile to a policy that the legislator would nonetheless like to see adopted. Party leaders, including presidents and legislative leaders, must similarly sometimes manage deeply divided or cross-pressured coalitions. When faced with such issues, elected officials may actively seek to turn over controversial political questions to the courts so as to circumvent a paralyzed legislature and avoid the political fallout that would come with taking direct action themselves. As Mark Graber (1993) has detailed in cases such as slavery and abortion, elected officials may prefer judicial resolution of disruptive political issues to direct legislative action, especially when the courts are believed to be sympathetic to the politician's own substantive preferences but even when the attitude of the courts is uncertain or unfavorable (see also, Lovell 2003). Even when politicians do not invite judicial intervention, strategically minded courts will take into account not only the policy preferences of well-positioned policymakers but also the willingness of those potential policymakers to act if doing so means that they must assume responsibility for policy outcomes. For cross-pressured politicians and coalition leaders, shifting blame for controversial decisions to the Court and obscuring their own relationship to those decisions may preserve electoral support and coalition unity without threatening active judicial review (Arnold 1990; Fiorina 1986; Weaver 1986). The conditions for the exercise of judicial review may be relatively favorable when judicial invalidations of legislative policy can be managed to the electoral benefit of most legislators. In the cases considered previously, fractious coalitions produced legislation that presidents and party leaders deplored but were unwilling to block. Divisions within the governing coalition can also prevent legislative action that political leaders want taken, as illustrated in the following case.

#### But he’d use the plan to horsetrade for legislation

Tristan Brown, Seeking Alpha, 11/8/12, Don't Expect The EPA To Finish Off Thermal Coal, seekingalpha.com/article/990181-don-t-expect-the-epa-to-finish-off-thermal-coal

Carbon Pollution Standard for New Power Plants (CPS): The CPS will restrict the greenhouse gas (GHG) emissions of new fossil fuel-fired electric utility generating units with a capacity greater than 25 MW. Affected power plants will be required to limit the carbon intensity of electricity produced to below 1000 lbs CO2/MWh. Coal-fired units have a carbon intensity of roughly 1700 lbs CO2/MWh while natural gas-fired units have an intensity of 800 lbs CO2/MWh, so this proposed regulation is widely viewed as an effort to force new power plants to employ natural gas rather than coal as feedstock. It has easily been one of most contentious pieces of proposed EPA regulation in recent years, likely because it arose from the fallout of the failed American Clean Energy and Security Act - President Obama's signature cap-and-trade plan that died in the Senate after Scott Brown was elected to the Senate seat previously held by the late Ted Kennedy, depriving Democrats of their supermajority there.

The CPS is currently in the public hearing phase, with a final rule expected within the next 12 months.

Cross-State Air Pollution Rule (CSAPR): The CSAPR requires 27 eastern states to significantly reduce emissions of sulfur dioxide (SO2) and nitrogen oxides (NOx) that cross state lines. While coal isn't explicitly singled out as a feedstock, its high contribution to the covered emissions causes coal-fired power plants to be affected. The impact of this regulation is relatively minimal compared to the other two regulations, with the EPA calculating that it will incur annual costs of $0.8-$1.6 billion.

The future of the CSAPR is highly uncertain at present, as the U.S. Court of Appeals for the D.C. Circuit ruled in August that the regulation exceeds the EPA's mandate to regulate emissions and must be revised.

Of the three regulations described above, one has been rejected by a federal circuit court, one is currently being reconsidered, and one has yet to be finalized. It is therefore premature to draw any significant conclusions regarding their impacts on the U.S. coal industry, as at least one (CSAPR) and possibly all three regulations will be relaxed before being implemented. Furthermore, the regulation with the broadest impact, the CPS, will only apply to new electric utility generating units. While existing units will need to be replaced at some point in the future due to age, these units can last decades (our analyses generally assume a 20 year life expectancy, and industry partners tell us that 30 years is more realistic). The CPS in particular, then, cannot be expected to put the coal industry out of business anytime soon.

We still have checks and balances

There's one final point that people forget when they forecast doom for the coal industry over the next four years: President Obama cannot spend an entire term ruling by decree. The Republicans hold a 41-vote majority in the House of Representatives, and the Democrats are at least five votes shy of a supermajority in the Senate. While the EPA operates within the executive branch and can theoretically act without the permission of Congress, in reality proposed EPA regulation is simply a presidential bargaining chip in negotiations with Congress. The Republicans have enough votes to block any and all legislation proposed by President Obama and his Democratic allies in Congress. If the Republicans want to see an EPA regulation weakened and are willing to engage in some horse-trading, then I fully expect an exchange to happen (for example, as part of a grand bargain to avert the coming "fiscal cliff").

Presidents tend to focus on their legacies during their second term, and if the only way President Obama can pass a signature piece of legislation is by gutting the above EPA regulations, then the regulation will be gutted. After all, the only reason we have the CPS in the first place is because the Republicans refused to play ball on cap-and-trade back in 2009.

Conclusion

Shares in coal mining companies have fallen sharply on the news of President Obama's election victory, largely due to concerns that the EPA now has free reign to impose crushing regulations on the thermal coal industry. The EPA is currently considering three major regulations that will significantly affect the coal industry. The future of each is uncertain at present, however, due to federal court rulings, internal revisions, and limiting regulatory language.

Furthermore, the 2012 election is not the 2008 election. The GOP, which is strongly opposed to environmental regulations on industry (particularly during a time of high unemployment), holds a strong majority in the House and enough seats in the Senate to deprive the Democrats of the supermajority necessary to pass most legislation. Between the two, the Republicans have the ability (and the demonstrated resolve) to prevent President Obama from passing any legislation for at least the next two, and possibly four, years. Even if the EPA regulations on the coal industry are strictly formulated and enforced, President Obama will likely use them as a bargaining chip if the Republicans are willing to negotiate on future legislation.

#### Labor fight kills the bill

Anna Palmer, 3/22/13, Immigration deal in limbo as business, labor clash, dyn.politico.com/printstory.cfm?uuid=1B5B052A-9CA3-4105-8BBE-B24B22287C3E

The Senate’s “Gang of Eight” is preparing to leave town with a deal on immigration reform in limbo, stalled by a fight between Big Labor and Big Business.

On Thursday morning, it had appeared that a deal was in hand over the major remaining sticking point: the outlines of a broad new visa program aimed at balancing the need for foreign workers in low-skilled jobs with the desires of American workers competing for those same jobs.

So much for optimism.

In a closed-door session that stretched late into Thursday night, **things got heated**. Sources said negotiations grew extremely tense after business groups balked. There were more talks on Friday — but no more progress, even though negotiations continued in a rare Friday night session of the Senate.

Now, the Gang of Eight faces a quandary. If senators can’t win the endorsement of labor and business, they must soon decide whether to go their own way — absent the support of the U.S. Chamber of Commerce and AFL-CIO — and hope the powerful interest groups stay neutral when a bill eventually emerges.

The senators said they would continue to negotiate with the interest groups during their two-week recess, with the goal of narrowing their differences, winning their backing and rolling out a proposal in the second week of April. That would set up a Senate Judiciary Committee vote before the end of the month, with floor votes by early summer.

“People have a lot at stake here,” said Sen. John McCain (R-Ariz.). “This is a huge deal. Talking about the lives of 11 million people just to start with, so I understand why passions are high, and sentiments are high."

Late Friday night, tensions were still at a boil. Labor officials accused Republicans and business groups of proposing “congressionally sanctioned poverty” for low-skilled workers. And Chamber officials attacked labor groups for preventing a deal from taking shape.

“The unions have jeopardized the entire immigration reform effort, which would provide a pathway to legalization and citizenship for the 10-11 million undocumented workers, because of their refusal to take a responsible stance on a small temporary worker program,” Randy Johnson, the Chamber’s senior vice president of Labor, Immigration, and Employee Benefits, said in a late Friday night statement. “These types of programs have always been considered a key part of comprehensive immigration reform.”

#### Obama’s not involved

Julie Pace, Associated press whtie house correspondent, 3/27/13, Obama: Immigration bill could pass by summer, www.timesunion.com/news/politics/article/Obama-back-at-forefront-of-immigration-debate-4389183.php

While overhauling the nation's patchwork immigration laws is a top second term priority for the president, he has ceded the negotiations almost entirely to Congress. He and his advisers have calculated that a bill crafted by Capitol Hill stands a better chance of winning Republican support than one overtly influenced by the president. In his interviews Wednesday, Obama tried to **stay out of the prickly policy issues** that remain unfinished in the Senate talks, though he said a split between business and labor on wages for new low-skilled workers was unlikely to "doom" the legislation.

#### No issue spillover

Judson Berger, 3/4/13, Recurring budget crises could put squeeze on Obama's second-term priorities, www.foxnews.com/politics/2013/03/04/recurring-budget-crises-could-put-squeeze-on-obama-second-term-priorities/

Rep. Luis Gutierrez, D-Ill., a vocal advocate for immigration reform, voiced confidence Monday that the administration and Congress could handle the busy agenda.

"The spirit of bipartisan cooperation that is keeping the immigration issue moving forward has not been poisoned by the sequester and budget stalemate, so far," he said in a statement. "The two sets of issues seem to exist in parallel universes where I can disagree with my Republican colleagues strenuously on budget matters, but still work with them effectively to eventually reach an immigration compromise. ... I remain extremely optimistic that immigration reform is going to happen this year."

Immigration reform efforts are still marching along despite the budget drama. Obama met last week on the issue with Sens. John McCain, R-Ariz., and Lindsey Graham, R-S.C., who both are part of a bipartisan group crafting legislation.

#### Border security kills

Fawn Johnson, 3/21/13, Border Triggers Could Sink Immigration Deal, www.nationaljournal.com/daily/border-triggers-could-sink-immigration-deal-20130321

Republicans' insistence that border-security benchmarks be met before legalizing 11-12 million illegal immigrants could sink an emerging compromise measure that is expected to be unveiled in a few weeks.

The “Gang of Eight” senators negotiating a sweeping immigration bill are on track to unveil draft legislation at the beginning of April, according to congressional aides. Similarly, a bipartisan group of House members is honing its own version. The cornerstone of both measures is a mass probationary legalization of noncriminal undocumented immigrants.

Legalization is a significant concession from Republicans, who are reluctant to give breaks to immigrants who violated the law. They acknowledge, however, that mass deportation is not possible and that millions of illegal residents are bad for national security.

Conservatives are worried that once a bill passes, legalization will take the pressure off immigration authorities to stop further illegal entry and to find and deport those who manage to make it in without authorization. To keep that from happening, the negotiators are discussing a variety of enforcement-related benchmarks, or “triggers,” that would need to be met before the population of undocumented immigrants can move toward citizenship.

But some lawmakers worry that forestalling citizenship in the name of border security may not be enough of an incentive for the authorities. After all, only half of legal immigrants in the country now go to the trouble of becoming U.S. citizens. Once the illegal population is given provisional legal status, they might not be clamoring as hard for government action that would allow them to become full-fledged citizens.

Rep. Raul Labrador, R-Idaho, a leading voice for tea-party conservatives on immigration, has suggested that even the probationary legalization of illegal immigrants should wait until some enforcement mechanisms are in place. “We have to have enforcement triggers happen before anyone receives any kind of legal status,” he said Wednesday. “Certain objective triggers that we can measure.”

Labrador is walking a tightrope between the tea-party House members who follow his lead on immigration and the immigrant-friendly lawmakers with whom he is trying to strike a deal. The two groups don’t speak the same language. For hardcore conservatives, only tough enforcement benchmarks could give them enough comfort to support the legislation. “We cannot simply legalize 12 million people and enforce the laws later,” Senate Judiciary Committee ranking Republican Chuck Grassley, R-Iowa, said Wednesday.

But Labrador’s suggestion is a deal-breaker for immigrant advocates and Democrats. “Whoever’s saying that, they’re trying to kill the bill before it even gets started,” said Alison Reardon, legislative consultant for the Service Employees International Union, which represents thousands of immigrant workers. “We should continue to work to secure our borders, but there’s no way to do that and wait for legalization. Border security is an ongoing thing.”

The **Obama** administration **isn’t helping** on this front, because it has been more aggressive than any previous administration in deporting and detaining illegal immigrants. Almost half of those in deportation proceedings have committed no other crimes.

## 2ac aviation

#### Aviation key to the economy, competitiveness and trade

NAW, National Aerospace Week, 2011, Aerospace and Defense: Second to None, http://www.nationalaerospaceweek.org/wp-content/uploads/2010/04/whitepaper.pdf

**Civil aviation is an economic engine** directly and indirectly contributing more than $1.3 trillion — or 5.6 percent of gross domestic product — to the U.S. economy. It supports nearly 11 million jobs with a payroll of $369 billion.9 **Civil aviation contributes positively to the U.S. trade balance, creates high paying jobs, keeps just-intime business models viable and connects all Americans to** friends, family and **business opportunities**.

All of that economic activity passes through the nation’s air traffic system. As long as the system can accommodate the rising demand for air travel and just-in-time express delivery, the growth of jobs and economic activity associated with civil aviation will continue. Our current system is safe, but antiquated and highly inefficient. We need to replace our 1960s-era air traffic control technology with a much more accurate and efficient 21st century satellite-based Next Generation Air Transportation System (NextGen).

NextGen is essential to helping airlines return to profitability. It is critical for reducing fuel consumption and airplane emissions. Without NextGen, our national airspace will remain cluttered and inefficient and undermine the economic benefits of America’s commercial aviation industry.

Excluding the costs of delays due to system inefficiency, failure to institute NextGen could cost the U.S. about $35 billion in annual economic loss by 2014 and as much as $52 billion in annual economic loss by 2024 — and that’s only in unmet demand and lost productivity. Businesses related to or dependent on aviation risk losing as many as two million jobs every five years if the nation doesn’t implement NextGen.

The entire U.S. fleet of civil aircraft can be NextGen equipped in less than three years for less funding than has been committed to surface transportation infrastructure projects. Experts say with an equipped fleet and a commitment to accelerate supporting ground infrastructure, NextGen could be in place in five to eight years instead of 10 to 15.

Full NextGen deployment requires the production and installation of hundreds of thousands of high-tech avionic products assembled by skilled workers in U.S. factories and maintenance stations in every state. Without these products, our National Airspace System cannot upgrade to satellite-based navigation and will lag behind systems in other countries.

Building and deploying NextGen equipment, procedures and infrastructure could create approximately 153,600 jobs.10 A viable aviation sector enhances economic activity in a wide number of industries outside aviation, including travel, tourism and industries that rely on just-in-time global inventories and shipping capability.

**Implications on the trade front are** also **important**. **Our strong competitive position in aerospace is being challenged** by the European Union, Australia, Canada and other countries. China and India, which will witness the greatest growth in aviation travel for years to come, will look to either the United States or Europe for leadership as they develop their respective air traffic control systems. If the United States does not promptly deploy these technologies, opportunities for U.S. manufacturers and workers could be lost.

#### Critical to US airpower

DavidThompson, President, American Institute of Aeronautics and Astronautics, 2009, The Aerospace Workforce, Federal News Service

Aerospace systems are of considerable importance to U.S. national security, economic prosperity, technological vitality, and global leadership. Aeronautical and space systems protect our citizens, armed forces, and allies abroad. They connect the farthest corners of the world with safe and efficient air transportation and satellite communications, and they monitor the Earth, explore the solar system, and study the wider universe. The U.S. aerospace sector also contributes in major ways to America's economic output and hightechnology employment. Aerospace research and development and manufacturing companies generated approximately $240 billion in sales in 2008, or nearly 1.75 percent of our country's gross national product. They currently employ about 650,000 people throughout our country. U.S. government agencies and departments engaged in aerospace research and operations add another 125,000 employees to the sector's workforce, bringing the total to over 775,000 people. Included in this number are more than 200,000 engineers and scientists -one of the largest concentrations of technical brainpower on Earth. However, the U.S. aerospace workforce is now facing the most serious demographic challenge in his 100-year history. Simply put, today, many more older, experienced professionals are retiring from or otherwise leaving our industrial and governmental aerospace workforce than early career professionals are entering it. This imbalance is expected to become even more severe over the next five years as the final members of the Apollo-era generation of engineers and scientists complete 40or 45-year careers and transition to well-deserved retirements. In fact, around 50 percent of the current aerospace workforce will be eligible for retirement within just the next five years. Meanwhile, the supply of younger aerospace engineers and scientists entering the industry is woefully insufficient to replace the mounting wave of retirements and other departures that we see in the near future. In part, this is the result of broader technical career trends as engineering and science graduates from our country's universities continue a multi-decade decline, even as the demand for their knowledge and skills in aerospace and other industries keeps increasing. Today, only about 15 percent of U.S. students earn their first college degree in engineering or science, well behind the 40 or 50 percent levels seen in many European and Asian countries. Due to the dual-use nature of aerospace technology and the limited supply of visas available to highly-qualified non-U.S. citizens, our industry's ability to hire the best and brightest graduates from overseas is also severely constrained. As a result, unless effective action is taken to reverse current trends, the U.S. aerospace sector is expected to experience a dramatic decrease in its technical workforce over the next decade. Your second question concerns the implications of a cutback in human spaceflight programs. AIAA's view on this is as follows. While U.S. human spaceflight programs directly employ somewhat less than 10 percent of our country's aerospace workers, its influence on attracting and motivating tomorrow's aerospace professionals is much greater than its immediate employment contribution. For nearly 50 years the excitement and challenge of human spaceflight have been tremendously important factors in the decisions of generations of young people to prepare for and to pursue careers in the aerospace sector. This remains true today, as indicated by hundreds of testimonies AIAA members have recorded over the past two years, a few of which I'll show in brief video interviews at the end of my statement. Further evidence of the catalytic role of human space missions is found in a recent study conducted earlier this year by MIT which found that 40 percent of current aerospace engineering undergraduates cited human space programs as the main reason they chose this field of study. Therefore, I think it can be predicted with high confidence that a major cutback in U.S. human space programs would be substantially detrimental to the future of the aerospace workforce. Such a cutback would put even greater stress on an already weakened strategic sector of our domestic high-technology workforce. Your final question centers on other issues that should be considered as decisions are made on the funding and direction for NASA, particularly in the human spaceflight area. In conclusion, AIAA offers the following suggestions in this regard. Beyond the previously noted critical influence on the future supply of aerospace professionals, administration and congressional leaders should also consider the collateral damage to the space industrial base if human space programs were substantially curtailed. Due to low annual production rates and highly-specialized product requirements, the domestic supply chain for space systems is relatively fragile. Many second and third-tier suppliers in particular operate at marginal volumes today, so even a small reduction in their business could force some critical suppliers to exit this sector. Human space programs represent around 20 percent of the $47 billion in total U.S. space and missile systems sales from 2008. Accordingly, a major cutback in human space spending could have large and highly adverse ripple effects throughout commercial, defense, and scientific space programs as well, potentially triggering a series of disruptive changes in the common industrial supply base that our entire space sector relies on.

#### Only air power can mitigate global conflicts and deter major war

Dunlap 6 – Maj. General, deputy judge advocate of the Air Force, National War College graduate with over 30 years of Armed Forces Experience (Charles Jr., Armed Forces Journal, “America’s Asymmetric Advantage”, http://www.armedforcesjournal.com/2006/09/2009013)

So where does that leave us? If we are smart, we will have a well-equipped high-technology air power capability. Air power is America's asymmetric advantage and is really the only military capability that can be readily applied across the spectrum of conflict, including, as is especially important these days, potential conflict. Consider the record. It was primarily air power, not land power, that kept the Soviets at bay while the U.S. won the Cold War. And it was not just the bomber force and the missileers; it was the airlifters, as well. There are few strategic victories in the annals of military history more complete and at so low a human cost as that won by American pilots during the Berlin airlift. Armageddon was avoided. And the flexibility and velocity of air power also provides good-news stories in friendly and low-threat areas. For example, huge U.S. transports dropping relief supplies or landing on dirt strips in some area of humanitarian crisis get help to people on a timeline that can make a real difference. Such operations also illustrate, under the glare of the global media, the true American character the world needs to see more often if our strategic goals are to be achieved. Air power also doesn't have the multi-aspect vulnerabilities that boots on the ground do. It can apply combat power from afar and do so in a way that puts few of our forces at risk. True, occasionally there will be a Francis Gary Powers, and certainly the Vietnam-era POWs — mostly airmen — became pawns for enemy exploitation. Yet, if America maintains its aeronautical superiority, the enemy will not be able to kill 2,200 U.S. aviators and wound another 15,000, as the ragtag Iraqi terrorists have managed to do to our land forces. And, of course, bombs will go awry. Allegations will be made (as they are currently against the Israelis) of targeting civilians and so forth. But the nature of the air weapon is such that an Abu Ghraib or Hadithah simply cannot occur. The relative sterility of air power — which the boots-on-the-ground types oddly find distressing as somehow unmartial — nevertheless provides greater opportunity for the discreet application of force largely under the control of well-educated, commissioned officer combatants. Not a total insurance policy against atrocity, but a far more risk-controlled situation. Most important, however, is the purely military effect. The precision revolution has made it possible for air power to put a bomb within feet of any point on earth. Of course, having the right intelligence to select that point remains a challenge — but no more, and likely much less so, than for the land forces. The technology of surveillance is improving at a faster rate than is the ability to conceal. Modern conveniences, for example, from cell phones to credit cards, all leave signatures that can lead to the demise of the increasing numbers of adversaries unable to resist the siren song of techno-connection. Regardless, eventually any insurgency must reveal itself if it is to assume power, and this inevitably provides the opportunity for air power to pick off individuals or entire capabilities that threaten U.S. interests. The real advantage — for the moment anyway — is that air power can do it with impunity and at little risk to Americans. The advances in American air power technology in recent years make U.S. dominance in the air intimidating like no other aspect of combat power for any nation in history. The result? Saddam Hussein's pilots buried their airplanes rather than fly them against American warplanes. Indeed, the collapse of the Iraqi armed forces was not, as the BOTGZ would have you believe, mainly because of the brilliance of our ground commanders or, in fact, our ground forces at all. The subsequent insurgency makes it clear that Iraqis are quite willing to take on our ground troops. What really mattered was the sheer hopelessness that air power inflicted on Iraq's military formations. A quotation in Time magazine by a defeated Republican Guard colonel aptly captures the dispiriting effect of high-tech air attack: "[Iraqi leaders] forgot that we are missing air power. That was a big mistake. U.S. military technology is beyond belief." It is no surprise that the vaunted Republican Guard, the proud fighting organization that tenaciously fought Iran for years, practically jumped out of their uniforms and scattered at the sound of approaching U.S. aircraft. This same ability to inflict hopelessness was even more starkly demonstrated in Afghanistan. For a millennium, the Afghans have been considered among the toughest fighters in the world. Afghan resistance has turned the countryside into a gigantic military cemetery for legions of foreign invaders. For example, despite deploying thousands of troops, well-equipped Soviet forces found themselves defeated after waging a savage war with practically every weapon at their disposal. So what explains the rapid collapse of the Taliban and al-Qaida in 2001? Modern air power. More specifically, the marriage of precision weapons with precise targeting by tiny numbers of Special Forces troops on the ground. The results were stunning. Putatively invulnerable positions the Taliban had occupied for years literally disappeared in a rain of satellite-directed bombs from B-1s and B-52s flying so high they could be neither seen nor heard. This new, high-tech air power capability completely unhinged the resistance without significant commitment of American boots on the ground. Indeed, the very absence of American troops became a source of discouragement. As one Afghan told the New York Times, "We pray to Allah that we have American soldiers to kill," adding disconsolately, "These bombs from the sky we cannot fight." Another equally frustrated Taliban fighter was reported in the London Sunday Telegraph recently as fuming that "American forces refuse to fight us face to face," while gloomily noting that "[U.S.] air power causes us to take heavy casualties." In other words, the Taliban and al-Qaida were just as tough as the mujahideen who fought the Russians, and more than willing to confront U.S. ground forces, but were broken by the hopelessness that American-style air power inflicted upon them. MORE THAN BOMBS Today it is more than just bombing with impunity that imposes demoralization; it is reconnoitering with impunity. This is more than just the pervasiveness of Air Force-generated satellites. It also includes hundreds of unmanned aerial vehicles that are probing the landscape in Iraq and Afghanistan. They provide the kind of reliable intelligence that permits the careful application of force so advantageous in insurgency and counterterrorism situations. The insurgents are incapable of determining where or when the U.S. employs surveillance assets and, therefore, are forced to assume they are watched everywhere and always. The mere existence of the ever-present eyes in the sky no doubt inflicts its own kind of stress and friction on enemy forces. In short, what real asymmetrical advantage the U.S. enjoys in countering insurgencies in Iraq and Afghanistan relates to a dimension of air power. Strike, reconnaissance, strategic or tactical lift have all performed phenomenally well. It is no exaggeration to observe that almost every improvement in the military situation in Iraq and Afghanistan is attributable to air power in some form; virtually every setback, and especially the strategically catastrophic allegations of war crimes, is traceable to the land forces. While it will be seldom feasible for America to effectively employ any sort of boots-on-the-ground strategy in current or future counterinsurgency situations, the need may arise to destroy an adversary's capability to inflict harm on U.S. interests. Although there is no perfect solution to such challenges, especially in low-intensity conflicts, the air weapon is the best option. Ricks' report in "Fiasco," for example, that Iraq's weapons of mass destruction program never recovered from 1998's Operation Desert Fox and its four days of air attacks is interesting. It would appear that Iraq's scientific minds readily conceded the pointlessness of attempting to build the necessary infrastructure in an environment totally exposed to U.S. air attack. This illustrates another salient feature of air power: its ability to temper the malevolent tendencies of societies accustomed to the rewards of modernity. Given air power's ability to strike war-supporting infrastructure, the powerful impulse of economic self-interest complicates the ability of despots to pursue malicious agendas. American air power can rapidly educate cultured and sophisticated societies about the costs of war and the futility of pursuing it. This is much the reason why air power alone delivered victory in Operation Allied Force in Kosovo in 1999, without the need to put a single U.S. soldier at risk on the ground. At the same time, America's pre-eminence in air power is also the best hope we have to dissuade China — or any other future peer competitor — from aggression. There is zero possibility that the U.S. can build land forces of the size that would be of real concern to a China. No number of troops or up-armored Humvees, new radios or advanced sniper rifles worries the Chinese. What dominating air power precludes is the ability to concentrate and project forces, necessary elements to applying combat power in hostile areas. As but one illustration, think China and Taiwan. Saddam might have underestimated air power, but don't count on the Chinese to make the same mistake. China is a powerful, vast country with an exploding, many-faceted economy with strong scientific capabilities. It will take focused and determined efforts for the U.S. to maintain the air dominance that it currently enjoys over China and that, for the moment, deters them. Miscalculating here will be disastrous becasue, unlike with any counterinsurgency situation (Iraq included), the very existence of the U.S. is at risk.

# 1AR

## at: no asia war

Their defense doesn’t assume Chinese econ collapse—that’s the lynchpin of regional stability

Chen ‘1(Shuxen, RAND Corp, “China the United States and The Global Economy”, <http://www.rand.org/pubs/monograph_reports/2006/MR1300.pdf>)

Nevertheless, America’s main interests in China have been quite constant, namely peace, security, prosperity, and a healthy environment. Chinese interests in the United States have also been quite constant and largely compatible, notwithstanding sharp differences over Taiwan, strategic technology transfers, trade, and human rights. Indeed, U.S.-Chinese relations have been consistently driven by strong common interests in preventing mutually damaging wars in Asia that could involve nuclear weapons; in ensuring that Taiwan’s relations with the mainland remain peaceful; in sustaining the growth of the U.S., China, and other Asian-Pacific economies; and, in preserving natural environments that sustain healthy and productive lives. What happens in China matters to Americans. It affects America’s prosperity. China’s growing economy is a valuable market to many workers, farmers, and businesses across America, not just to large multinational firms like Boeing, Microsoft, and Motorola, and it could become much more valuable by opening its markets further. China also affects America’s security. It could either help to stabilize or destabilize currently peaceful but sometimes tense and dangerous situations in Korea, where U.S. troops are on the front line; in the Taiwan Straits, where U.S. democratic values and strategic credibility may be at stake; and in nuclear-armed South Asia, where renewed warfare could lead to terrible consequences. It also affects America’s environment. Indeed, how China meets its rising energy needs and protects its dwindling habitats will affect the global atmosphere and currently endangered species. China’s economic growth has slowed, while its social and environmental challenges have continued to mount. It faces difficult choices. The gains from economic liberalization have been waning. Painful institutional and political changes will be needed to sustain growth. Most immediately, political leaders will need to dismantle their counterproductive controls over the allocation of scarce capital, particularly through the state banking system. To restrain corruption, reform the tax system, and raise the revenues needed to pay for essential public works and services, China’s political leaders, lawmakers, regulators, and other officials will need to be made more openly and directly accountable to the people whose interests they claim to serve. Yet, China’s leadership, preoccupied with preserving its own power, lacks a convincing vision of China’s future. While we do not know whether China will rise to the challenge and prosper, or stagnate and falter, Americans have a great stake in China’s successful reform. That is why they have an interest in China’s acceding to the WTO, opening it to the global economy, and strengthening its compliance with international rules and norms. Even so, they expect potential conflicts of interests to recur. China would like the people of Taiwan to accept its view of Chinese sovereignty peacefully. But, when the people of Taiwan prepared to choose their next leader peacefully at the polls in 1996, and again in 2000, China asserted a right to impose its views on them forcefully, notwithstanding American insistence that it refrain from such violence. China also insists on its right to modernize its armed forces and to buy or sell strategic technologies, without disclosing how it does so and without conceding any allegations that it violated U.S. laws or its own treaty obligations. But Americans do not want it to acquire, deploy, or export strategic technologies that could be used against the United States or its allies in Northeast Asia, the Persian Gulf, or elsewhere. China’s self-perpetuating, one-party dictatorship also denies people’s right to political speech, religious assembly, and labor or other organizations outside of state and party control. Openly criticizing such strict constraints on human rights will continue to be an essential expression of American ideals. Until China strengthens its property laws to meet international market standards, disputes over the intellectual, financial, and tangible property rights of Americans in China will also persist, and could rapidly escalate or proliferate. Recent U.S. Presidents have made great efforts and had endless difficulties pursuing American interests in China. China was a source of troubles for President Clinton in 1998 and 1999. In particular, he seems to have let Chinese leaders expect more from him on Taiwan and the WTO than he was prepared to deliver. After announcing a new “strategic partnership” with China on his visit there in 1998, he neglected to reiterate America’s overriding interest in peace when he articulated the Chinese leadership’s “Three No’s” policy toward the recognition of two Chinas, support for Taiwan’s independence, and acceptance of applications by Taiwan to join international organiza tions, like the United Nation. At the time, this was reported to be the quid pro quo for letting President Clinton give a speech on Chinese TV, which was finally permitted without prior publicity when the viewing audience was predictably small. While the president’s recitation of the “Three No’s” did not alter U.S. commitments, critics saw it as taking the Chinese side in the crossstraits dispute and Taiwan’s President Lee took advantage of the ensuing controversy to assert special state-to-state relations between Taiwan and China. It is hard to know whether the cross-straits dialogue between the leaderships in Taiwan and China would have been renewed in the autumn of 1999, as planned, if President Clinton had not provoked President Lee into asserting Taiwan’s statehood. It is also too soon to say whether serious or lasting damage was done by his rejection of Premier Zhu’s unexpectedly bold and favorable offer in April 1999 for China’s accession to the WTO. The damage has been limited and partially repaired already from the president’s ill-advised hesitation to apologize for the unintended bombing of the Chinese Embassy in Belgrade and the Chinese leadership’s hasty and mistaken decision that it was a deliberate attack that justified nationalist reprisals by students stoning the U.S. Embassy in Beijing. Whatever the ultimate verdicts may be on these episodes since the first meeting of the RAND-China Reform Forum conference in Beijing in June 1998, they illustrate the great stakes and instabilities in the vital relationship between the United States and China. CONCLUSION Great common interests and risks of serious conflicts between the United States and China will keep raising difficult new challenges. They will require new initiatives for mutually beneficial cooperation and continuous efforts to avoid potentially critical misunderstandings over unforeseeable events in Taiwan, Korea, Japan, the Persian Gulf, Yugoslavia, or elsewhere. Without doubt, sustaining China’s economic growth and reinforcing its institutional reforms though greater openness is a winning prescription for both the United States and China. To pursue this course amid unexpected difficulties, both countries will need to pay close attention to many issues, conduct frank dialogues, and participate in constructive statesmanship. Ups and downs in U.S.-Chinese relations will likely recur, but they need not be as volatile as they have been in recent years. Assuming that the future will mirror the past, substantial changes in our situations and needs vis-à-vis each other will be unpredictable, inevitable, and hard to fathom. This puts a large premium on ensuring that there are clear communications between Chinese and Americans who are willing and able to keep the relationship on an even keel.

## 2ac natural gas – prices

#### Over-reliance on natural gas causes price escalation and supply disruptions

Mark McCullough, American Electric Power Executive Vice President, 9/20/12, 'AMERICAN ENERGY INITIATIVE', Lexis

AEP believes that it is not prudent for EPA, or any other agency, to adopt federal policies that foreclose the use of coal in the future development of baseload generation. Locking exclusively into new natural gas baseload generation over the long term could increase our reliance on natural gas for power generation to the detriment of the economy. Rather, maintaining fuel diversity through a balanced portfolio of energy resources that includes coal has been a successful strategy in providing abundant, reliable, low-cost electricity to power the nation's economic growth and high standard of living. The continued reliance on a diverse portfolio of fuels is clearly the wisest course of action to safeguard against the risk of market price fluctuations of natural gas or any our energy resource over the long-term.

By contrast, foreclosing the option to use of coal over the long- term could burden U.S. consumers with additional and unnecessary costs as U.S. energy providers replace retiring older generation sources and try to keep up with rising demand over the coming years. Further, as EGUs begin to rely more heavily on natural gas for electric generation, we run the risk that the energy prices will become increasingly volatile over the long term, with implications for the entire economy. 10

IMPORTANCE OF FUEL DIVERSITY

Fuel diversity is a concept that cannot be overstated when considering economic and energy security. Too great a reliance upon any one energy source creates a significant risk exposure to electricity price escalation and supply disruptions. As has been proven repeatedly across the globe, such exposure can lead to severe impacts

on residential, commercial, and industrial customers. For example, the recent catastrophe in Japan serves as a sobering reminder of what can happen if a single energy source is abruptly removed from use. In 2011, an earthquake and tsunami devastated shoreline communities and seriously damaged the Fukushima Daiichi nuclear power plant. Resultant radiation leaks and a greatly eroded public faith in safety of nuclear power have led to the shutting down of all of Japan's 54 nuclear reactors for mandatory maintenance and safety checks. Heavily populated areas of the country have faced the realities of rolling blackouts, while manufacturing facilities are reducing output, with some making moves to relocate abroad. Meanwhile, natural gas prices in Japan have nearly tripled as power producers have scrambled to fill the massive void left in their energy infrastructure.

Domestic energy disruptions and their consequences are clearly evident by such disasters as Hurricane Katrina in 2005, where nine oil refineries were shut down for an extended period of time and 30 oil platforms were either damaged or completely destroyed, dramatically hampering oil and gas production. United States natural gas prices spiked following the disaster and for months afterward remained more than double the price over the previous year. There is another unique feature to coal that must be considered from an energy security perspective. Coal is a solid and physically stable energy resource that can be safely stockpiled at the power plant site. A typical power plant takes advantage of this property by keeping an inventory of 30 to 60 days' supply of coal at the plant site. This is an incredibly valuable characteristic when considering the risks associated with supply interruptions. If storms, natural disasters, or other forces interrupt major gas pipeline infrastructure, gas-fired power plants immediately cease to produce electricity and cannot resume production until infrastructure repairs are made. Coal plants, on the other hand, can continue to operate if the major fuel supply is compromised. This is a factor of fundamental value to any energy security solution and has national security benefits as well.

## at: warming

No impact to warming

Mendelsohn, professor of forestry and environmental studies – Yale, ‘9

(Robert O., “Climate Change and Economic Growth,” <http://www.growthcommission.org/storage/cgdev/documents/gcwp060web.pdf>)

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.

## 2ac util

#### Util’s the only moral framework

**Murray 97** (Alastair, Professor of Politics at U. Of Wales-Swansea, *Reconstructing Realism*, p. 110)

Weber emphasised that, while the 'absolute ethic of the gospel' must be taken seriously, it is inadequate to the tasks of evaluation presented by politics. Against this 'ethic of ultimate ends' — Gesinnung — he therefore proposed the 'ethic of responsibility' — Verantwortung. First, whilst the former dictates only the purity of intentions and pays no attention to consequences, the ethic of responsibility commands acknowledgement of the divergence between intention and result. Its adherent 'does not feel in a position to burden others with the results of his [OR HER] own actions so far as he was able to foresee them; he [OR SHE] will say: these results are ascribed to my action'. Second, the 'ethic of ultimate ends' is incapable of dealing adequately with the moral dilemma presented by the necessity of using evil means to achieve moral ends: Everything that is striven for through political action operating with violent means and following an ethic of responsibility endangers the 'salvation of the soul.' If, however, one chases after the ultimate good in a war of beliefs, following a pure ethic of absolute ends, then the goals may be changed and discredited for generations, because responsibility for consequences is lacking. The 'ethic of responsibility', on the other hand, can accommodate this paradox and limit the employment of such means, because it accepts responsibility for the consequences which they imply. Thus, Weber maintains that only the ethic of responsibility can cope with the 'inner tension' between the 'demon of politics' and 'the god of love'. 9 The realists followed this conception closely in their formulation of a political ethic.10 This influence is particularly clear in Morgenthau.11 In terms of the first element of this conception, the rejection of a purely deontological ethic, Morgenthau echoed Weber's formulation, arguing tha/t:the political actor has, beyond the general moral duties, a special moral responsibility to act wisely ... The individual, acting on his own behalf, may act unwisely without moral reproach as long as the consequences of his inexpedient action concern only [HER OR] himself. What is done in the political sphere by its very nature concerns others who must suffer from unwise action. What is here done with good intentions but unwisely and hence with disastrous results is morally defective; for it violates the ethics of responsibility to which all action affecting others, and hence political action par excellence, is subject.12 This led Morgenthau to argue, in terms of the concern to reject doctrines which advocate that the end justifies the means, that the impossibility of the logic underlying this doctrine 'leads to the negation of absolute ethical judgements altogether'.13

### A2 financial crises

#### Financial crises re-entrench the system

Mead, 9 – Senior Fellow @ the Council on Foreign Relations

Walter Russell, <http://www.tnr.com/politics/story.html?id=571cbbb9-2887-4d81-8542-92e83915f5f8&p=2>)

And yet, this relentless series of crises has not disrupted the rise of a global capitalist system, centered first on the power of the United Kingdom and then, since World War II, on the power of the United States. After more than 300 years, it seems reasonable to conclude that financial and economic crises do not, by themselves, threaten either the international capitalist system or the special role within it of leading capitalist powers like the United Kingdom and the United States. If anything, the opposite seems true--that financial crises in some way *sustain* Anglophone power and capitalist development. Indeed, many critics of both capitalism and the "Anglo-Saxons" who practice it so aggressively have pointed to what seems to be a perverse relationship between such crises and the consolidation of the "core" capitalist economies against the impoverished periphery. Marx noted that financial crises remorselessly crushed weaker companies, allowing the most successful and ruthless capitalists to cement their domination of the system. For dependency theorists like Raul Prebisch, crises served a similar function in the international system, helping stronger countries marginalize and impoverish developing ones. Setting aside the flaws in both these overarching theories of capitalism, this analysis of economic crises is fundamentally sound--and especially relevant to the current meltdown. Cataloguing the early losses from the financial crisis, it's hard not to conclude that the central capitalist nations will weather the storm far better than those not so central. Emerging markets have been hit harder by the financial crisis than developed ones as investors around the world seek the safe haven provided by U.S. Treasury bills, and commodity-producing economies have suffered extraordinary shocks as commodity prices crashed from their record, boom-time highs. Countries like Russia, Venezuela, and Iran, which hoped to use oil revenue to mount a serious political challenge to American power and the existing world order, face serious new constraints. Vladimir Putin, Hugo Chavez, and Mahmoud Ahmadinejad must now spend less time planning big international moves and think a little bit harder about domestic stability. Far from being the last nail in America's coffin, the financial crisis may actually resuscitate U.S. power relative to its rivals.

#### Empirics

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Fareed, “The Capitalist Manifesto: Greed Is Good”, Jun 13, 2009, http://www.newsweek.com/id/201935/output/print)

A specter is haunting the world—the return of capitalism. Over the past six months, politicians, businessmen and pundits have been convinced that we are in the midst of a crisis of capitalism that will require a massive transformation and years of pain to fix. Nothing will ever be the same again. "Another ideological god has failed," the dean of financial commentators, Martin Wolf, wrote in the Financial Times. Companies will "fundamentally reset" the way they work, said the CEO of General Electric, Jeffrey Immelt. "Capitalism will be different," said Treasury Secretary Timothy Geithner. No economic system ever remains unchanged, of course, and certainly not after a deep financial collapse and a broad global recession. But over the past few months, even though we've had an imperfect stimulus package, nationalized no banks and undergone no grand reinvention of capitalism, the sense of panic seems to be easing. Perhaps this is a mirage—or perhaps the measures taken by states around the world, chiefly the U.S. government, have restored normalcy. Every expert has a critique of specific policies, but over time we might see that faced with the decision to underreact or overreact, most governments chose the latter. That choice might produce new problems in due course—a topic for another essay—but it appears to have averted a systemic breakdown. There is still a long road ahead. There will be many more bankruptcies. Banks will have to slowly earn their way out of their problems or die. Consumers will save more before they start spending again. Mountains of debt will have to be reduced. American capitalism is being rebalanced, reregulated and thus restored. In doing so it will have to face up to long-neglected problems, if this is to lead to a true recovery, not just a brief reprieve. Many experts are convinced that the situation cannot improve yet because their own sweeping solutions to the problem have not been implemented. Most of us want to see more punishment inflicted, particularly on America's bankers. Deep down we all have a Puritan belief that unless they suffer a good dose of pain, they will not truly repent. In fact, there has been much pain, especially in the financial industry, where tens of thousands of jobs, at all levels, have been lost. But fundamentally, markets are not about morality. They are large, complex systems, and if things get stable enough, they move on. Consider our track record over the past 20 years, starting with the stock-market crash of 1987, when on Oct. 19 the Dow Jones lost 23 percent, the largest one-day loss in its history. The legendary economist John Kenneth Galbraith wrote that he just hoped that the coming recession wouldn't prove as painful as the Great Depression. It turned out to be a blip on the way to an even bigger, longer boom. Then there was the 1997 East Asian crisis, during the depths of which Paul Krugman wrote in a Fortune cover essay, "Never in the course of economic events—not even in the early years of the Depression—has so large a part of the world economy experienced so devastating a fall from grace." He went on to argue that if Asian countries did not adopt his radical strategy—currency controls—"we could be looking at the kind of slump that 60 years ago devastated societies, destabilized governments, and eventually led to war." Only one Asian country instituted currency controls, and partial ones at that. All rebounded within two years. Each crisis convinced observers that it signaled the end of some new, dangerous feature of the economic landscape. But often that novelty accelerated in the years that followed. The 1987 crash was said to be the product of computer trading, which has, of course, expanded dramatically since then. The East Asian crisis was meant to end the happy talk about "emerging markets," which are now at the center of world growth. The collapse of Long-Term Capital Management in 1998—which then–Treasury secretary Robert Rubin described as "the worst financial crisis in 50 years"—was meant to be the end of hedge funds, which then massively expanded. The technology bubble's bursting in 2000 was supposed to put an end to the dreams of oddball Internet startups. Goodbye, Pets.com; hello, Twitter. Now we hear that this crisis is the end of derivatives. Let's see. Robert Shiller, one of the few who predicted this crash almost exactly—and the dotcom bust as well—argues that in fact we need more derivatives to make markets more stable. A few years from now, strange as it may sound, we might all find that we are hungry for more capitalism, not less. An economic crisis slows growth, and when countries need growth, they turn to markets. After the Mexican and East Asian currency crises—which were far more painful in those countries than the current downturn has been in America—we saw the pace of market-oriented reform speed up. If, in the years ahead, the American consumer remains reluctant to spend, if federal and state governments groan under their debt loads, if government-owned companies remain expensive burdens, then private-sector activity will become the only path to create jobs. The simple truth is that with all its flaws, capitalism remains the most productive economic engine we have yet invented. Like Churchill's line about democracy, it is the worst of all economic systems, except for the others. Its chief vindication today has come halfway across the world, in countries like China and India, which have been able to grow and pull hundreds of millions of people out of poverty by supporting markets and free trade. Last month India held elections during the worst of this crisis. Its powerful left-wing parties campaigned against liberalization and got their worst drubbing at the polls in 40 years.

## poverty

#### Quality of life is skyrocketing worldwide by all measures

Ridley, visiting professor at Cold Spring Harbor Laboratory, former science editor of *The Economist*, and award-winning science writer, 2010

(Matt, *The Rational Optimist*, pg. 13-15)

If my fictional family is not to your taste, perhaps you prefer statistics. Since 1800, the population of the world has multiplied six times, yet **average life expectancy has more than doubled and real income has risen more than nine times**. Taking a shorter perspective, in 2005, compared with 1955, the average human being on Planet Earth earned nearly three times as much money (corrected for inflation), ate one-third more calories of food, buried one-third as many of her children and could expect to live one-third longer. She was less likely to die as a result of war, murder, childbirth, accidents, tornadoes, flooding, famine, whooping cough, tuberculosis, malaria, diphtheria, typhus, typhoid, measles, smallpox, scurvy or polio. She was less likely, at any given age, to get cancer, heart disease or stroke. She was more likely to be literate and to have finished school. She was more likely to own a telephone, a flush toilet, a refrigerator and a bicycle. All this during a half-century when the world population has more than doubled, so that far from being rationed by population pressure, the goods and services available to the people of the world have expanded. It is, by any standard, an astonishing human achievement. Averages conceal a lot. **But even if you break down the world into bits**, **it is hard to find any region that was worse off in 2005 than it was in 1955**. Over that half-century, real income per head ended a little lower in only six countries (Afghanistan, Haiti, Congo, Liberia, Sierra Leone and Somalia), life expectancy in three (Russia, Swaziland and Zimbabwe), and infant survival in none. In the rest they have rocketed upward. Africa’s rate of improvement has been distressingly slow and patchy compared with the rest of the world, and many southern African countries saw life expectancy plunge in the 1990s as the AIDS epidemic took hold (before recovering in recent years). There were also moments in the half-century when you could have caught countries in episodes of dreadful deterioration of living standards or life chances – China in the 1960s, Cambodia in the 1970s, Ethiopia in the 1980s, Rwanda in the 1990s, Congo in the 2000s, North Korea throughout. Argentina had a disappointingly stagnant twentieth century. But overall, after fifty years, **the outcome for the world is** remarkably, astonishingly, **dramatically positive**. The average South Korean lives twenty-six more years and earns fifteen times as much income each year as he did in 1955 (and earns fifteen times as much as his North Korean counter part). The average Mexican lives longer now than the average Briton did in 1955. The average Botswanan earns more than the average Finn did in 1955. **Infant mortality is lower today in Nepal than it was in Italy in 1951**. The proportion of Vietnamese living on less than $2 a day has dropped from 90 per cent to 30 per cent in twenty years. The rich have got richer, but the poor have done even better. **The poor in the developing world grew their consumption twice as fast as the world as a whole between 1980 and 2000**. The Chinese are ten times as rich, one-third as fecund and twenty-eight years longer-lived than they were fifty years ago. Even Nigerians are twice as rich, 25 per cent less fecund and nine years longer-lived than they were in 1955. **Despite a doubling of the world population**, even **the raw number of people living in absolute poverty** (defined as less than a 1985 dollar a day) **has fallen since the 1950s**. The percentage living in such absolute poverty has dropped by more than half – to less than 18 per cent. That number is, of course, still all too horribly high, but the trend is hardly a cause for despair: at the current rate of decline, it would hit zero around 2035 – though it probably won’t. The United Nations estimates that poverty was reduced more in the last fifty years than in the previous 500.

#### Broader trends outweigh income – tech and ideas have lowered the cost of living.

Kenny, fellow at the New America Foundation and Center for Global Development, 2011

(Charles, also a senior economist at the World Bank, *Getting Better*, pg.10-11)

How can we reconcile the evidence of income stagnation in many of the world’s poorest countries with evidence of **dramatic advances in quality of life even for people stuck in those stagnant economies**? And what accounts for the comparatively weak link between growth in GDP per capita and rates of improvement in quality of life? The short answer is that the biggest success of development has not been making people richer but, rather, has been making the things that really matter—things like health and education—cheaper and more widely available. It is the invention and spread of **tech**nology **and ideas** that **have**, **literally**, **reduced the cost of living**. A considerable majority of people worldwide have benefited more in terms of quality of life from technological change and the spread of ideas than they have from income growth. **Even people today who remain as poor as their** parents, **grandparents**, and ancestors back through time **have seen quality-of-life** **improvements** that would astound their grandparents and, in many cases, would have been beyond the reach of their ancestors, however rich they might have been. For example, probably no country in the world saw much more than 90 percent of children survive their first year of life in 1900. It did not matter how rich the parents; the state of health technology placed a significant upper limit on an infant’s chance of survival. The United States saw an infant mortality rate of nearly 15 percent, despite an average income that was one of the highest in the world at the time—a little above $4,000 measured in today’s dollars. In this first decade of the twenty-first century, the country with the highest recorded infant mortality in the world is Sierra Leone, whose mortality rate is only 2 percent higher than the rate in the United States a century earlier—17 percent. Yet income per person in Sierra Leone has dipped as low as $404 in the recent past, or one-tenth the level of the United States a century ago. Countries as poor and wretched as Haiti, Burma, and the Congo have infant mortality rates today that are lower than those that any country in the world achieved in 1900.