# 1NC Round 4 vs. Northwestern LV

## 1NC T Procurement

#### A. Interpretation – acquisition is a restriction, NOT a financial incentive.

Menz, Faculty of Economics and Finance, School of Business, Clarkson University, ‘5

[Frederic, also from the Center for International Climate and Environmental Research, Oslo (CICERO), Norway, “Green electricity policies in the United States: case study,” Energy Policy, December, Science Direct]

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

#### Reduce means to make smaller, Dictionary.com

[http://dictionary.reference.com/browse/reduce?s=t]

1. to bring down to a smaller extent, size, amount, number, etc.: to reduce one's weight by 10 pounds.

#### Acquire means to come into possession of; in order to acquire, the thing must already exist

Merriam Webster Online [http://www.merriam-webster.com/dictionary/acquire]

1 : to get as one's own: a : to come into possession or control of often by unspecified means b : to come to have as a new or added characteristic, trait, or ability (as by sustained effort or natural selection) <acquire fluency in French> <bacteria that acquire tolerance to antibiotics> 2 : to locate and hold (a desired object) in a detector <acquire a target by radar>

#### B. Violation – They increase restrictions by mandating increased procurement contracts.

#### C. Standards

#### 1. Bidirectionality – their interpretation moots the direction of the restrictions part of the topic which allows the affirmative to effectively double their ground. Even if you think that they might also increase an incentive, they also certainly increase a restriction, and the ground advantage this generates outweighs any of their limits or education claims.

#### 2. Topic-specific education – they moot the debate about the market mechanisms of the topic. The predictable mechanism of the topic is to have the federal government either get out of the way of or incentivize the workings of the free market. They have the federal government participate in the market. The negative should always have a right to market bad solvency arguments, which they circumvent.

#### 3. Effects topicality – obtaining electricity does not increase the production of energy – even if they win that they increase demand, this just makes them effects T at best.

#### 4. Acquire is a transitive verb which requires its object to exist in order to be meaningful. Vote neg on presumption: they don’t acquire anything because SMR’s and electricity from SMR’s do not exist. At best, the development of SMR’s is an EFFECT of the plan.

#### D. Voter for fairness and education.

## 2NC: T Procurement

### Overview:

#### Our interpretation is that financial incentives include various tax incentives and loans and exclude government regulations like power purchase agreements.

#### This interpretation is best for debate. First, it preserves topic specific education. Our interp guarantees debates over market mechanism approaches to energy production—this was the core area identified by the topic committee and the community. Government purchasing is an end around on market debates, eliminating all of this topic education.

#### Second, allowing direct government purchase of energy steals core negative ground: the topic should require the aff to intervene in energy markets through market mechanisms, yielding direct government purchases of energy that bypass the markets to the negative. Granting this ground to the aff not only eliminates predictable negative link ground to market mechanisms, it grants the aff additional advantages based on government purchasing.

#### Third, keeping government purchasing distinct from financial incentives is the only way to prevent bidirectionality. Government purchasing is a regulation, which means that the aff now has double the ground—increase or decrease restrictions. That allows in a wave of affs that have vastly better solvency and different advantages: RPS, Carbon Tax, Cap and Trade, just to name a few.

### Interp

#### Guaranteed purchasing is a non-financial incentive.

Czinkota, Associate Professor at the McDonough School of Business at Georgetown University, ‘9

[Michael, Fundamentals of International Business, p. 69 – google books]

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

### A2: Webb

#### Webb includes PROCUREMENT CONTRACTS because in Canada they often are given with a condition to do something else. That makes them a financial incentive. NOT the procurement, but the EXTERNAL MOTIVATION. Plus, it’s Canadian.

Webb, lecturer in the Faculty of Law at the University of Ottawa, ‘93

[Kernaghan, “Thumbs, Fingers, and Pushing on String: Legal Accountability in the Use of Federal Financial Incentives”, 31 Alta. L. Rev. 501 (1993) Hein Online]

At the same time, Canadian governments make use of many financial incentives to encourage private sector compliance with public policies. As used here, incentives qualify as examples of the State's "fingers." Contrary to the impression given by the strong-thumbs-no-fingers aphorism, the position taken here is that in fact there are many fingers being used by the federal government, but often they operate outside of the glare of public scrutiny and effective control. Fingers can be less clumsy than thumbs, and are capable of probing where thumbs cannot go -- for example, the federal government can 8 and has created many incentive programs which directly affect matters of provincial legislative jurisdiction9 whereas it can only establish traditional regulatory regimes in relation to federal legislative heads of power.10 Incentives often take the form of funds which have "strings attached" -- for example, in the case of certain incentive programs involving contributions11 for economic development, and procurement contracts 12 it is not uncommon to find stipulations that recipients establish employment equity plans, or meet environmental requirements.13 Certainly, incentives have been used in Canada to achieve policy objectives where it is difficult to imagine coercive sanctions being employed: for example, threats of fines or imprisonment to achieve research and development, to increase the birth rate, to stimulate the Canadian art and film sector, or mining exploration might raise hackles, yet each of these contexts attracts financial incentives.14 Moreover, just as the fingers work well in tandem with thumbs, so too it is not uncommon to find financial incentives used in conjunction with coercive instruments. For example, there are incentives to abate pollution or to hire disadvantaged groups, offered at the same time as traditional pollution control and anti-discrimination regimes are in place.15

### A2: Waxman

#### Waxman def is based on DOE order 5700.5

Waxman 98—Solicitor General of the US (Seth, Brief for the United States in Opposition for the US Supreme Court case HARBERT/LUMMUS AGRIFUELS PROJECTS, ET AL., PETITIONERS v. UNITED STATES OF AMERICA, http://www.justice.gov/osg/briefs/1998/0responses/98-0697.resp.opp.pdf]

2 On November 15, 1986, Keefe was delegated “the authority, with respect to actions valued at $50 million or less, to approve, execute, enter into, modify, administer, closeout, terminate and take any other necessary and appropriate action (collectively, ‘Actions’) with respect to Financial Incentive awards.” Pet. App. 68, 111-112. Citing DOE Order No. 5700.5 (Jan. 12, 1981), the delegation defines “Financial Incentives” as the authorized financial incentive programs of DOE, “including direct loans, loan guarantees, purchase agreements, price supports, guaranteed market agreements and any others which may evolve.” The delegation proceeds to state, “[h]owever, a separate prior written approval of any such action must be given by or concurred in by Keefe to accompany the action.” The delegation also states that its exercise “shall be governed by the rules and regulations of [DOE] and policies and procedures prescribed by the Secretary or his delegate(s).” Pet. App. 111-113.

#### That’s no longer statute

DOE 2k [5/8/00 “DOE N 251.35, Cancellation of Directives,” <https://www.directives.doe.gov/directives/0251.035-CNotice>]

Effective immediately the following directives are canceled:

• DOE Order 5484.1, ENVIRONMENTAL PROTECTION, SAFETY AND HEALTH PROTECTION INFORMATION REPORTING REQUIREMENTS, dated 2-24-81;

• DOE Order 1332.2, UNIFORM REPORTING SYSTEM FOR FEDERAL ASSISTANCE, dated 10-31-83;

• DOE Order 5700.5A, POLICY AND MANAGEMENT PROCEDURES FOR FINANCIAL INCENTIVE PROGRAMS, dated 6-8-92; and

• HQ 1325.1, ACTION COORDINATION AND TRACKING SYSTEM, dated 7-30-79.

### Limits

#### 1. The cards in their counterinterp only intend to define financial incentives for their own articles, not overall. Our 1NC Menz evidence is a categorization of all state energy policies in the United States.

#### This interp is still bidirectional: they allow increase restrictions affs, which doubles aff ground. Specifically, they open the door to RPS, facility sitings, building codes, appliance standards, fuel standards, and transmission and storage affs by allowing increased restrictions by the aff.

#### 4. Opening the door to increased regulations massively explodes aff ground:

Database of State Incentives for Renewables and Efficiency 12

<http://www.dsireusa.org/glossary/>

¶ DSIRE organizes incentives and policies that promote renewable energy and energy efficiency into two general categories -- (1) Financial Incentives and (2) Rules, Regulations & Policies -- and roughly 30 specific types of incentives and policies. This glossary provides a description of each specific incentive and policy type.¶ ¶ FINANCIAL INCENTIVES (click to collapse section)¶ ¶ Corporate Tax Incentives¶ Corporate tax incentives include tax credits, deductions and exemptions. These incentives are available in some states to corporations that purchase and install eligible renewable energy or energy efficiency equipment, or to construct green buildings. In a few cases, the incentive is based on the amount of energy produced by an eligible facility. Some states allow the tax credit only if a corporation has invested a minimum amount in an eligible project. Typically, there is a maximum limit on the dollar amount of the credit or deduction. In recent years, the federal government has offered corporate tax incentives for renewables and energy efficiency. (Note that corporate tax incentives designed to support manufacturing and the development of renewable energy systems or equipment, or energy efficiency equipment, are categorized as “Industry Recruitment/Support” in DSIRE.)¶ Grant Programs¶ States offer a variety of grant programs to encourage the use and development of renewables and energy efficiency. Most programs offer support for a broad range of technologies, while a few programs focus on promoting a single technology, such as photovoltaic (PV) systems. Grants are available primarily to the commercial, industrial, utility, education and/or government sectors. Most grant programs are designed to pay down the cost of eligible systems or equipment. Others focus on research and development, or support project commercialization. In recent years, the federal government has offered grants for renewables and energy efficiency projects for end-users. Grants are usually competitive.¶ Green Building Incentives¶ Green buildings are designed and constructed using practices and materials that minimize the impacts of the building on the environment and human health. Many cities and counties offer financial incentives to promote green building. The most common form of incentive is a reduction or waiver of a building permit fee. Several organizations issue certification for green buildings, including the U.S. Green Building Council (LEED certification), the Green Building Initiative (Green Globes certification), and the NAHB Research Center (National Green Building Certification). (Note that this category includes green building incentives that do not fall under other DSIRE incentive categories, such as tax incentives and grant programs.)¶ Industry Recruitment/Support¶ To promote economic development and the creation of jobs, some states offer financial incentives to recruit or cultivate the manufacturing and development of renewable energy systems and equipment. These incentives commonly take the form of tax credits, tax exemptions and grants. In some cases, the amount of the incentive depends on the quantity of eligible equipment that a company manufactures. Most of these incentives apply to several renewable energy technologies, but a few states target specific technologies, such as wind or solar. These incentives are usually designed as temporary measures to support industries in their early years. They commonly include a sunset provision to encourage the industries to become self-sufficient.¶ Loan Programs¶ Loan programs provide financing for the purchase of renewable energy or energy efficiency systems or equipment. Low-interest or zero-interest loans for energy efficiency projects are a common demand-side management (DSM) practice for electric utilities. State governments also offer low-interest loans for a broad range of renewable energy and energy efficiency measures. These programs are commonly available to the residential, commercial, industrial, transportation, public and/or non-profit sectors. Loan rates and terms vary by program; in some cases, they are determined on an individual project basis. Loan terms are generally 10 years or less. In recent years, the federal government has offered loans and/or loan guarantees for renewables and energy efficiency projects.¶ PACE Financing¶ Property-Assessed Clean Energy (PACE) financing effectively allows property owners to borrow money to pay for renewable energy and/or energy-efficiency improvements. The amount borrowed is typically repaid over a period of years via a special assessment on the owner's property. In general, local governments (such as cities and counties) that choose to offer PACE financing must be authorized to do so by state law.¶ Performance-Based Incentives¶ Performance-based incentives (PBIs), also known as production incentives, provide cash payments based on the number of kilowatt-hours (kWh) or BTUs generated by a renewable energy system. A "feed-in tariff" is an example of a PBI. To ensure project quality, payments based on a system’s actual performance are generally more effective than payments based on a system’s rated capacity. (Note that tax incentives based on the amount of energy produced by an eligible commercial facility are categorized as “Corporate Tax Incentives” in DSIRE.)¶ Personal Tax Incentives¶ Personal tax incentives include income tax credits and deductions. Many states offer these incentives to reduce the expense of purchasing and installing renewable energy or energy efficiency systems and equipment. The percentage of the credit or deduction varies by state, and in most cases, there is a maximum limit on the dollar amount of the credit or deduction. An allowable credit may include carryover provisions, or it may be structured so that the credit is spread out over a certain number of years. Eligible technologies vary widely by state. In recent years, the federal government has offered personal tax credits for renewables and energy efficiency.¶ Property Tax Incentives¶ Property tax incentives include exemptions, exclusions, abatements and credits. Most property tax incentives provide that the added value of a renewable energy system is excluded from the valuation of the property for taxation purposes. For example, if a new heating system that uses renewable energy costs more than a conventional heating system, the additional cost of the renewable energy system is not included in the property assessment. In a few cases, property tax incentives apply to the additional cost of a green building. Because property taxes are collected locally, some states have granted local taxing authorities the option of allowing a property tax incentive for renewables.¶ Rebate Programs¶ States, utilities and a few local governments offer rebates to promote the installation of renewables and energy efficiency projects. The majority of rebate programs that support renewables are administered by states, municipal utilities and electric cooperatives; these programs commonly provide funding for solar water heating and/or photovoltaic (PV) systems. Most rebate programs that support energy efficiency are administered by utilities. Rebate amounts vary widely by technology and program administrator.¶ Sales Tax Incentives¶ Sales tax incentives typically provide an exemption from, or refund of, the state sales tax (or sales and use tax) for the purchase of a renewable energy system, an energy-efficient appliance, or other energy efficiency measures. Several states have established an annual “sales tax holiday” for energy efficiency measures by annually allowing a temporary exemption – usually for one or two days – from the state sales tax.¶ ¶ RULES, REGULATIONS & POLICIES (click to collapse section)¶ ¶ Appliance/Equipment Efficiency Standards¶ Many states have established minimum efficiency standards for certain appliances and equipment. In these states, the retail sale of appliances and equipment that do not meet the established standards is prohibited. The federal government has also established efficiency standards for certain appliances and equipment. When both the federal government and a state have adopted efficiency standards for the same type of appliance or equipment, the federal standard overrides the state standard (even if the state standard is stricter).¶ Building Energy Codes¶ Building energy codes adopted by states (and some local governments) require commercial and/or residential construction to adhere to certain energy standards. While some government entities have developed their own building energy codes, many use existing codes (sometimes with state-specific amendments), such as the International Energy Conservation Code (IECC), developed and published by the International Code Council (ICC); or ASHRAE 90.1, developed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). A few local building energy codes require certain commercial facilities to meet green building standards.¶ Energy Efficiency Resource Standards (EERS)¶ Energy efficiency resource standards (EERS) are state policies that require utilities to meet specific targets for energy savings according to a set schedule. EERS policies establish separate reduction targets for electricity sales, peak electric demand and/or natural gas consumption. In most cases, utilities must achieve energy savings by developing demand-side management (DSM) programs, which typically provide financial incentives to customers to install energy-efficient equipment. An EERS policy is sometimes coupled with a state’s renewables portfolio standard (RPS). In these cases, energy efficiency is typically included as a lower-tier resource.¶ Energy Standards for Public Buildings¶ Many states and local governments, as well as the federal government, have chosen to lead by example by requiring new government buildings to meet strict energy standards. DSIRE includes policies that have established green building standards, energy-reduction goals, equipment-procurement requirements, and/or the use of on-site renewable energy. Many of these policies require that new government buildings (and renovated buildings, in some cases) attain a certain level of certification under the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) program. Equipment-procurement policies often mandate the use of the most efficient equipment, including equipment that meets federal Energy Star criteria. Policies designed to encourage the use of on-site renewables generally establish conditional requirements tied to life-cycle cost analysis.¶ Equipment Certification Requirements¶ Policies requiring renewable energy equipment to meet certain standards serve to protect consumers from buying inferior equipment. These requirements not only benefit consumers; they also protect the renewable energy industry by keeping substandard systems out of the market.¶ Generation Disclosure¶ Some states require electric utilities to provide their customers with specific information about the electricity that the utility supplies. This information, which generally must be shared with customers periodically, usually includes the utility's fuel mix percentages and emissions statistics. In states with restructured electricity markets, generation disclosure policies are designed to help consumers make informed decisions about the electricity and suppliers they choose. A few states that have not fully restructured their electricity markets require generation disclosure by utilities.¶ Green Power Purchasing Policies¶ Government entities, businesses, residents, schools, non-profits and others can play a significant role in supporting renewable energy by buying electricity from renewable resources, or by buying renewable energy credits (RECs). Many state and local governments, as well as the federal government, have committed to buying green power to account for a certain percentage of their electricity consumption. Green power purchases are typically executed through contracts with green power marketers or project developers, through utility green power programs, or through community aggregation.¶ Interconnection Standards¶ Interconnection standards specify the technical and procedural process by which a customer connects an electricity-generating to the grid. Such standards include the technical and contractual terms that system owners and utilities must abide by. State public utilities commissions typically establish standards for interconnection to the distribution grid, while the Federal Energy Regulatory Commission (FERC) has adopted standards for interconnection to the transmission level. Many states have adopted interconnection standards, but some states’ standards apply only to investor-owned utilities -- not to municipal utilities or electric cooperatives. (Several states have adopted interconnection guidelines, which are weaker than standards and generally apply only to net-metered systems.)¶ Line Extension Analysis¶ When a prospective customer requests electric service for a home or facility that is not currently served by the electric grid, the customer usually must pay a distance-based fee for the cost of extending power lines to the home or facility. In some cases, it is cheaper to use an on-site renewable energy system to meet a prospective customer’s electricity needs. A few states require utilities to provide information regarding renewable energy options when a line extension is requested.¶ Mandatory Utility Green Power Option¶ Several states require electric utilities to offer customers the option to buy electricity generated from renewable resources, commonly known as “green power.” Typically, utilities offer green power generated using renewable resources that the utilities own (or for which they contract), or they buy renewable energy credits (RECs) from a provider certified by a state public utilities commission.¶ Net Metering¶ For electric customers who generate their own electricity, net metering allows for the flow of electricity both to and from the customer – typically through a single, bi-directional meter. When a customer’s generation exceeds the customer’s use, electricity from the customer flows back to the grid, offsetting electricity consumed by the customer at a different time during the same billing cycle. In effect, the customer uses excess generation to offset electricity that the customer otherwise would have to purchase at the utility’s full retail rate. Net metering is required by law in most U.S. states, but these policies vary widely.¶ Public Benefit Funds¶ Most public benefit funds (PBFs) were developed by states during the electric utility restructuring era, in the late 1990s, to ensure continued support for renewable energy, energy efficiency and low-income energy programs. These funds are commonly supported through a very small surcharge on electricity consumption (e.g., $0.002/kWh). This charge is sometimes referred to as a "system benefits charge" (SBC). PBFs commonly support rebate programs, loan programs, research and development, and energy education programs.¶ Renewables Portfolio Standards (RPS)¶ Renewable portfolio standards (RPSs) require utilities to use renewable energy or renewable energy credits (RECs) to account for a certain percentage of their retail electricity sales -- or a certain amount of generating capacity -- according to a specified schedule. (Renewable portfolio goals are similar to RPS policies, but renewable portfolio goals are not legally binding.) Most U.S. states have established an RPS. The term “set-aside” or “carve-out” refers to a provision within an RPS that requires utilities to use a specific renewable resource (usually solar energy) to account for a certain percentage of their retail electricity sales (or a certain amount of generating capacity) according to a set schedule.¶ Solar & Wind Access Policies¶ Solar and wind access policies are designed to establish a right to install and operate a solar or wind energy system at a home or other facility. Some solar access laws also ensure a system owner’s access to sunlight. These laws may be implemented at both the state and local levels. In some states, access rights prohibit homeowners associations, neighborhood covenants and local ordinances from restricting a homeowner’s right to use solar energy. Easements, the most common form of solar access policy, allow for the rights to existing access to a renewable resource on the part of one property owner to be secured from an owner whose property could be developed in such a way as to restrict that resource. An easement is usually transferred with the property title. At the local level, communities use several policies to protect solar access, including solar access ordinances, development guidelines requiring proper street orientation, zoning ordinances that contain building height restrictions, and solar permits.¶ Solar & Wind Contractor Licensing¶ Some states have established a licensing process for solar-energy contractors and/or wind-energy contractors. These requirements are designed to ensure that contractors have the necessary knowledge and experience to install systems properly. Solar licenses typically take the form of either a separate, specialized solar contractor’s license, or a specialty classification under a general electrical or plumbing license.¶ Solar & Wind Permitting Standards¶ Permitting standards can facilitate the installation of wind and solar energy systems by specifying the conditions and fees involved in project development. Some local governments have adopted simplified or expedited permitting standards for wind and/or solar. “Top-of-the-stack” permitting (or fast-track permitting) saves system owners and project developers time and money. Some states have capped fees that local governments may charge for a permit for a solar or wind energy system. In addition, some states have developed (or have supported the development of) model wind ordinances for use by local governments.

#### 5. “Government transfer of Public funds” has zero limits: This interp allows any transfer of funds, with no strings attached. They have no justification for allowing the aff ALL forms of government buy-up affs.

#### 6. Specifically, this interp lets in affs that completely dodge links to government alteration of energy markets, destroys core negative ground

Singh-Renewable Energy Policy Project-98 [Government Procurement to Expand PV Markets](http://www.repp.org/repp_pubs/pdf/pv4.pdf)

<http://www.repp.org/repp_pubs/articles/pv/pvs.html#4>

A good government procurement program for renewables should take into account the needs of the private market. The creation of a government market for renewables that bears no relationship to the private market eliminates the indirect, but potentially enormous economic development and environmental benefits of commercializing renewables in the private market. Too often policy efforts to create a government market have resulted in submarkets reflective of governments’ unique needs and procedures. For many PV firms, devoting substantial staff time to government contracts may detract significantly from efforts oriented to the larger private market.

#### 7. Our interp solves the “limits” argument in their evidence: this card just says they exclude government regulations that could *indirectly* act as incentives – our interp already eliminates those affs because financial incentives

#### 8. Prefer our interp, it’s supported by the International Energy Agency. They are the definitive experts on Energy policies worldwide by virtue of coordinating and tracking all of them. The IEA is who national governments consult on their energy policies.

#### 9. Their interpretation mixes burdens: The only way that government purchase of energy is an incentive is by providing a unique purchaser for the SMRs – this demands that the aff first win that no one will buy energy from SMRs in the SQ.

## 1NC Procure CP

#### Text: The United States Department of Defense should procure, funded through up-front appropriations, small modular nuclear reactors to be owned by the Department of Defense, and located on military bases in the United States that lack power purchase agreements for electricity generated by utility-owned small modular nuclear reactors.

#### The United States Federal Government should facilitate joint operation and management of DOD-owned small modular reactors by DOD and the Department of Energy and remove limitations on per-project allocations of operation and maintenance funding for bases with DOD-owned small modular reactors.

#### Solves the case---DOD procurement contracts accelerate SMR commercialization---spills over to widespread adoption

CSPO 10

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

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

#### DOD ownership of the project solves the case and avoids REC purchases

Loni Silva 12, J.D., The George Washington University Law School, Summer 2012, “THE PROBLEMS WITH USING RENEWABLE ENERGY CERTIFICATES TO MEET FEDERAL RENEWABLE ENERGY REQUIREMENTS,” Public Contract Law Journal, Vol. 41, No. 4

The best way to address the problems with FEMP’s REC interpretation is to render the use of RECs to meet EPAct 2005 and EO 13423 obsolete. RECs should only be used as a short-term, stop-gap solution to meet the renewable energy requirements. 139 The long-term goal should be for agencies to consume bundled renewable energy produced on or near agency installations.¶ Consuming renewable energy would eliminate the current problems with FEMP’s REC interpretation. First, consuming renewable energy would eliminate the problem with best value because, unlike RECs, renewable energy responds to and fulﬁlls agencies’ actual energy needs. 140 For Joe, the energy manager, the ability to use renewable energy means that he would not need to spend part of his energy budget on a commodity that does not address his actual energy needs. 141¶ Second, consuming renewable energy would eliminate the problems with transparency and accountability. 142 Because the policies plainly require agencies to consume renewable energy, complying by consuming renewable energy, rather than purchasing RECs, would be transparent. 143 Moreover, because this method of compliance is transparent and allows a clear view of what the Government is doing in response to the requirements of the policies, it allows the Government to be held accountable. 144¶ Third, consuming renewable energy produced at on-site facilities would further the policies’ goal of developing on-site renewable energy facilities. 145 Having facilities on or near agency property would provide power to the installation in case the grid is attacked or fails. 146 It would also promote the energy independence, security, and sustainability of both the Federal Government and the nation as a whole by developing new renewable energy facilities. 147¶ Developing new renewable energy facilities on or near agency installations would allow agencies to consume renewable energy, rather than RECs. 148 Of course, not all locations are able to support a renewable energy facility. 149 However, because the policy requirements are agency-wide rather than installation speciﬁc, agencies can build facilities at installations with available land, increasing renewably energy production to compensate for installations where the lack of available land or other factors makes facility development impossible. 150

## 1NC RECs DA

#### DOD reducing reliance on REC purchases now

FT 12

[Federal Times, 7/22/12, “Agencies buying energy credits to meet mandates,” http://www.federaltimes.com/article/20120722/FACILITIES02/307220006/Agencies-buying-energy-credits-meet-mandates]

But some agencies are trying to buck the trend and reduce their reliance on RECs. ¶ The Interior Department said it plans to build more renewable energy projects and purchase fewer RECs. ¶ For example, the National Park Service plans to install solar panels on top of its visitor station at Assateague Island, in Berlin, Md. ¶ “We anticipate a reduced reliance on RECs to meet mandated renewable energy goals,” spokesman Drew Malcomb said. ¶ The Defense Department intends to buy fewer RECs and instead invest money in on-site projects. ¶ “It takes money to buy RECs, and you are not creating any new capacity. You are just spending money to meet a goal,” Dorothy Robyn, deputy undersecretary of Defense for installations and environment, said in an interview. ¶ Robyn is confident DoD will get there without paying for credits. “We are in a position to generate renewable energy on our own installations,” she said. ¶ Pentagon spokeswoman Melinda Morgan said the department does not track how much it spends on credits each year. ¶ In 2011, DoD decided to scale back its purchase of RECs, despite having a goal to obtain 5 percent of its facilities’ energy needs from renewable energy sources. It achieved only 3.1 percent after reducing its purchase of credits from 440,000 to 248,000 megawatt hours, Robyn said.

#### Energy obtained through alternative financing doesn’t count towards mandates that force DOD to increase reliance on renewables---causes renewable energy credit purchases to make up the difference.

GAO 9

[Government Accountability Office, December 2009, “Defense Infrastructure: DOD Needs to Take Actions to Address Challenges in Meeting Federal Renewable Energy Goals,” <http://www.gao.gov/new.items/d10104.pdf>]

As we explained earlier in this report, DOD expects to rely increasingly on alternative financing approaches to meet the renewable energy goals. For DOD to effectively implement these approaches, the department will require energy management staff who have the relevant expertise for implementing the approaches. However, because we found that the services and their installations’ staff often lack expertise in developing alternative financing approaches, DOD may by limited in its ability both to use these approaches to develop renewable energy projects and to do so in a manner that adequately protects the government’s financial resources committed to these approaches. ¶ According to DOD officials, in most cases, private developers are generally interested in partnering with DOD in order to sell the projects’ unbundled energy or associated renewable energy certificates to a third party. These officials explained that the generally accepted business model for these types of approaches includes a renewable energy resource on or near DOD land that is harnessed by a project financed, built, and operated by thirdparty developer that then sells the unbundled energy to DOD or other customers and typically retains ownership of the project’s renewable energy certificates.48¶ However, under such approaches, DOD often would neither consume the renewable energy nor retain the renewable energy certificates. When DOD does not consume the renewable energy, a developer would provide some other form of compensation for the use of the renewable resource on DOD land. For example, in the largest renewable energy project on DOD land, DOD does not consume the energy but instead receives financial compensation based on the sale of the project’s energy. If DOD neither consumes the renewable energy nor retains the renewable energy certificates, a serious challenge may be posed to DOD’s ability to meet the renewable energy goals. That occurs because, according to DOE’s guidance on implementation of the 2005 Act and the 2007 Executive Order—guidance designed to preserve the integrity of the renewable energy certificate market—for an agency to count a project’s renewable energy toward these goals, the project must meet two requirements. First, the renewable energy must be produced and used on-site at a federal agency or the renewable energy must be produced by a project owned by a federal agency but installed on private property. Second, the agency must retain or replace the renewable energy certificates associated with the energy produced. In addition, as we discussed earlier, unlike DOE, DOD has not issued guidance that provides a clear explanation of its methodology for calculating progress toward the fiscal year 2025 goal under the 2007 Defense Authorization Act, including DOD’s definition of “consumption” and the treatment of renewable energy certificates in that context. ¶

#### REC reliance sends a signal of greenwashing – turns green tech leadership.

Auden Schendler 7, Vice President of sustainability at Aspen Skiing Company, October 2007, “When Being Green Backfires,” Harvard Business Review, Vol. 85, Issue 10

The danger in buying RECs is that the mainstream press has begun to challenge claims about their environmental value. Articles have appeared in publications including BusinessWeek and the Financial Times pointing out that most RECs don't actually offset emissions, and the skepticism is spreading across the Internet. Indeed, most RECs don't result in the creation of clean electricity, which would have been generated anyway, whether or not an REC was printed. As consumers become increasingly savvy about evaluating companies' environmental claims, businesses that tout REC purchases may expose themselves to charges of greenwashing.¶ A report released in 2006 by an environmental organization called Clean Air--Cool Planet was among the first to rigorously examine the environmental impact of RECs. The report found that while most RECs don't lead to carbon-emissions reductions, a minority do, by directly helping to finance, say, the construction of a new wind farm. Companies that buy RECs and want to avoid charges of greenwashing should seek out these higher-quality and more costly certificates, whose purchase directly and demonstrably helps reduce carbon emissions.¶ RECs, supporters argue, create a market mechanism that spurs the development of new wind, solar, and other green-electricity plants. As demand for RECs grows, their prices will rise, encouraging developers to build more renewable power facilities that can generate income through increasingly profitable sales of the certificates. Unfortunately, because there has been such a surplus of cheap RECs--and no easy way to distinguish between high- and low-quality offerings--the market mechanism has remained stalled for the most part. If companies, mindful of their reputations, reject inferior RECs and begin demanding quality ones, that could jump-start the production of renewable electricity and actually reduce carbon emissions. Corporate scrutiny and activism might even foster the development of a badly needed tool that could clean up the entire REC industry in one masterstroke: a third-party gold standard for REC quality.

#### U.S. leadership on the broader green tech transition solves extinction

Klarevas 9

[Louis Klarevas, Professor for Center for Global Affairs @ New York University, 12/15, “Securing American Primacy While Tackling Climate Change: Toward a National Strategy of Greengemony,” http://www.huffingtonpost.com/louis-klarevas/securing-american-primacy\_b\_393223.html]

As national leaders from around the world are gathering in Copenhagen, Denmark, to attend the United Nations Climate Change Conference, the time is ripe to re-assess America's current energy policies - but within the larger framework of how a new approach on the environment will stave off global warming and shore up American primacy. By not addressing climate change more aggressively and creatively, the United States is squandering an opportunity to secure its global primacy for the next few generations to come. To do this, though, the U.S. must rely on innovation to help the world escape the coming environmental meltdown. Developing the key technologies that will save the planet from global warming will allow the U.S. to outmaneuver potential great power rivals seeking to replace it as the international system's hegemon. But the greening of American strategy must occur soon. The U.S., however, seems to be stuck in time, unable to move beyond oil-centric geo-politics in any meaningful way. Often, the gridlock is portrayed as a partisan difference, with Republicans resisting action and Democrats pleading for action. This, though, is an unfair characterization as there are numerous proactive Republicans and quite a few reticent Democrats. The real divide is instead one between realists and liberals. Students of realpolitik, which still heavily guides American foreign policy, largely discount environmental issues as they are not seen as advancing national interests in a way that generates relative power advantages vis-à-vis the other major powers in the system: Russia, China, Japan, India, and the European Union. ¶ Liberals, on the other hand, have recognized that global warming might very well become the greatest challenge ever faced by (hu)mankind. As such, their thinking often eschews narrowly defined national interests for the greater global good. This, though, ruffles elected officials whose sworn obligation is, above all, to protect and promote American national interests. What both sides need to understand is that by becoming a lean, mean, green fighting machine, the U.S. can actually bring together liberals and realists to advance a collective interest which benefits every nation, while at the same time, securing America's global primacy well into the future. To do so, the U.S. must re-invent itself as not just your traditional hegemon, but as history's first ever green hegemon. Hegemons are countries that dominate the international system - bailing out other countries in times of global crisis, establishing and maintaining the most important international institutions, and covering the costs that result from free-riding and cheating global obligations. Since 1945, that role has been the purview of the United States. Immediately after World War II, Europe and Asia laid in ruin, the global economy required resuscitation, the countries of the free world needed security guarantees, and the entire system longed for a multilateral forum where global concerns could be addressed. The U.S., emerging the least scathed by the systemic crisis of fascism's rise, stepped up to the challenge and established the postwar (and current) liberal order. But don't let the world "liberal" fool you. While many nations benefited from America's new-found hegemony, the U.S. was driven largely by "realist" selfish national interests. The liberal order first and foremost benefited the U.S. With the U.S. becoming bogged down in places like Afghanistan and Iraq, running a record national debt, and failing to shore up the dollar, the future of American hegemony now seems to be facing a serious contest: potential rivals - acting like sharks smelling blood in the water - wish to challenge the U.S. on a variety of fronts. This has led numerous commentators to forecast the U.S.'s imminent fall from grace. Not all hope is lost however. With the impending systemic crisis of global warming on the horizon, the U.S. again finds itself in a position to address a transnational problem in a way that will benefit both the international community collectively and the U.S. selfishly. The current problem is two-fold. First, the competition for oil is fueling animosities between the major powers. The geopolitics of oil has already emboldened Russia in its 'near abroad' and China in far-off places like Africa and Latin America. As oil is a limited natural resource, a nasty zero-sum contest could be looming on the horizon for the U.S. and its major power rivals - a contest which threatens American primacy and global stability. Second, converting fossil fuels like oil to run national economies is producing irreversible harm in the form of carbon dioxide emissions. So long as the global economy remains oil-dependent, greenhouse gases will continue to rise. Experts are predicting as much as a 60% increase in carbon dioxide emissions in the next twenty-five years. That likely means more devastating water shortages, droughts, forest fires, floods, and storms. In other words, if global competition for access to energy resources does not undermine international security, global warming will. And in either case, oil will be a culprit for the instability. Oil arguably has been the most precious energy resource of the last half-century. But "black gold" is so 20th century. The key resource for this century will be green gold - clean, environmentally-friendly energy like wind, solar, and hydrogen power. Climate change leaves no alternative. And the sooner we realize this, the better off we will be. What Washington must do in order to avoid the traps of petropolitics is to convert the U.S. into the world's first-ever green hegemon. For starters, the federal government must drastically increase investment in energy and environmental research and development (E&E R&D). This will require a serious sacrifice, committing upwards of $40 billion annually to E&E R&D - a far cry from the few billion dollars currently being spent. By promoting a new national project, the U.S. could develop new technologies that will assure it does not drown in a pool of oil. Some solutions are already well known, such as raising fuel standards for automobiles; improving public transportation networks; and expanding nuclear and wind power sources. Others, however, have not progressed much beyond the drawing board: batteries that can store massive amounts of solar (and possibly even wind) power; efficient and cost-effective photovoltaic cells, crop-fuels, and hydrogen-based fuels; and even fusion. Such innovations will not only provide alternatives to oil, they will also give the U.S. an edge in the global competition for hegemony. If the U.S. is able to produce technologies that allow modern, globalized societies to escape the oil trap, those nations will eventually have no choice but to adopt such technologies. And this will give the U.S. a tremendous economic boom, while simultaneously providing it with means of leverage that can be employed to keep potential foes in check. The bottom-line is that the U.S. needs to become green energy dominant as opposed to black energy independent.

## 1NC Microgrids

#### The United States Federal Government should substantially increase investment in smart microgrid technology for its military bases in the United States via a diverse portfolio tailored to individual installation circumstances, including non-nuclear renewable energies for on-site generation, increased backup generation capacity, improvements in energy efficiency and energy storage, intelligent local energy management, and accelerated implementation of the SPIDERS project.

#### Smart microgrids solve DOD grid vulnerability --- best analysis goes neg.

SERDP 12

[The Strategic Environmental Research and Development Program, DoD’s environmental science and technology program, executed in partnership with DOE and EPA, 7/10/12, “DoD Study Finds Microgrids Offer Improved Energy Security for DoD Installations,” http://www.serdp.org/News-and-Events/News-Announcements/Program-News/DoD-study-finds-microgrids-offer-improved-energy-security-for-DoD-installations]

Advanced microgrids offer a cost-effective solution to military installations' growing vulnerability to the fragile electric grid, according to a study released today by DoD’s Office of Installations and Environment. The study performed by MIT Lincoln Laboratory looked at different microgrid architectures and characteristics and compared their relative cost-effectiveness. The report provides insight into increasing energy security and reducing energy costs through the incorporation of renewable energy resources into microgrids, as well as new market opportunities for DoD in the area of demand response and ancillary services. The study highlights the extent of ongoing microgrid work across DoD. It identified 44 installations that either had existing microgrids, planned installation of microgrids, or conducted microgrid studies or demonstrations at their facilities. The authors interviewed more than 75 people from the military Services, the Office of the Secretary of Defense, and the Department of Energy. The analysis categorized the ongoing microgrid efforts based on several key attributes including size, maturity, the inclusion of renewable resources, and the ability to operate in a grid-tied manner. The analysis confirms the value of microgrids to DoD. The combination of on-site energy generation and storage, together with the microgrid’s ability to manage local energy supply and demand, allow installations to shed non-essential loads and maintain mission-critical loads if the electric grid is disrupted. The report illustrates the largely untapped potential of moving to smarter, next generation microgrids that would accommodate far greater penetration of renewable energy sources, as well as tighter integration with the electrical grid. If solar resources that are increasingly being installed on DoD installations were available during islanded operation of a microgrid, they could significantly extend the islanding time. Moreover, a microgrid that could operate when tied to the grid would offer new opportunities for the DoD to generate cost savings by using backup generation assets during normal operation and generate financial revenue by using advanced ancillary services. One important finding is that there will be no “one size fits all” solution. The location of a military installation influences the options available for energy generation sources, the options available for interaction with the local utility, the characteristics of the local electricity market, and the regulatory environment. The most effective microgrids will be those that take into account the needs of the local commercial electric grid and are configured so that they can earn value helping to meet those needs.

## 2NC: Microgrids CP

### Overview

#### The counterplan deploys smart microgrids on military installations---it tailors an approach to each installation’s circumstances to provide the best mix of site-specific renewables, bolsters energy storage capacity and backup generation, and integrates smart management so mission-critical assets can operate independently of the grid---that’s SERDP and Ackerman.

#### None of their answers presume the combination of mechanisms---the full CP altogether resolves deficiencies of any single plank---that solves islanding, and DOD will remedy any failures in the system.

Robyn, Deputy Under Secretary of Defense for Installations and Environment, ‘12

[Dr. Dorothy, 3/27/12, Testimony before the Senate Appropriations Subcommittee on Military Construction, Veterans Affairs, and Related Agencies, Congressional Documents & Publications]

The first two elements of our facility energy strategy contribute indirectly to installation energy security; in addition, we are addressing the problem directly. A major focus of my office is smart microgrid technology. Smart microgrids and energy storage offer a more robust and cost effective approach to ensuring installation energy security than the current one--namely, back-up generators and (limited) supplies of on-site fuel. Although microgrid systems are in use today, they are relatively unsophisticated, with limited ability to integrate renewable and other distributed energy sources, little or no energy storage capability, uncontrolled load demands and "dumb" distribution that is subject to excessive losses. By contrast, we envision microgrids as local power networks that can utilize distributed energy, manage local energy supply and demand, and operate seamlessly both in parallel to the grid and in "island" mode. Advanced microgrids are a "triple play" for DoD's installations. Such systems will reduce installation energy costs on a day-to-day basis by allowing for load balancing and demand response. They will also facilitate the incorporation of renewable and other on-site energy generation. Most important, the combination of on-site energy and storage, together with the microgrid's ability to manage local energy supply and demand, will allow an installation to shed non-essential loads and maintain mission-critical loads if the grid goes down. The Installation Energy Test Bed, discussed below, has funded ten demonstrations of microgrid and storage technologies to evaluate the benefits and risks of alternative approaches and configurations. Demonstrations are underway at Twentynine Palms, CA; Fort Bliss, TX; Joint Base McGuire-Dix-Lakehurst, NJ; Fort Sill, OK; and several other installations. Although microgrids will address the grid security problem over time, we are taking steps to address near-term concerns. Together with the Assistant Secretary of Defense for Homeland Defense and Americas' Security Affairs, I co-chair DoD's Electric Grid Security Executive Council (EGSEC), which works to improve the security, adequacy and reliability of electricity supplies and related infrastructure key to the continuity of critical defense missions. In addition to working across DoD, the EGSEC works with the Departments of Energy and Homeland Security. The three agencies recently created an Energy Surety Public Private Partnership (ES3P) to work with the private sector. As an initial focus, the ES3P is collaborating with four utilities in the National Capital Region to improve energy security at mission critical facilities.

### A2: Renewables Bad – Generic

#### Several distinctions mean none of their generic “renewables fail” arguments cut it:

#### 1) The combination of the CP’s planks resolves deficiencies in each one---upgrades to efficiency and energy storage lower the bar for how much renewables have to generate---smart management means bases can instantly switch to the most optimal sources---that’s above.

#### 2) Bases resolve their generic “renewables bad” args. U.S. bases are positioned in exactly the right locations to utilize renewables

Dr. Dorothy Robyn 10, Deputy Under Secretary of Defense for Installations and Environment, 1/27/10, Statement before the Senate Homeland Security and Governmental Affairs Committee, Subcommittee on Federal Financial Management, Government Information, Federal Services and International Security, http://www.acq.osd.mil/ie/download/robyn\_testimony\_27jan10.pdf

With respect to fixed installations, the Department has pursued a two-part investment strategy that is designed to (1) reduce the demand for traditional energy while (2) increasing the supply of renewable energy sources. In addition to the Department’s military construction budget, financing for these investments has come from our Energy Conservation Investment Program, Energy Savings Performance Contracts and mechanisms such as Enhanced Use Leases and Power Purchase Agreements. ¶ Efforts to curb demand—through conservation measures and improved energy efficiency—are by far the most cost-effective way to improve an installation’s energy profile. A large fraction of our energy efficiency investments go to retrofit existing buildings; typical retrofit projects install high efficiency HVAC systems, energy management control systems, new roofs and improved lighting. We are also taking advantage of new construction to incorporate more energy efficient designs, material and equipment, using LEED Silver standards as a guide. From 2005 to 2008, we reduced the energy intensity of our facilities by 11 percent through conservation and investment in energy efficiency. ¶ On the supply side, military installations—which are large and disproportionately located in the Southwest and on our coasts—are well-situated to support solar, wind, geothermal and other forms of renewable energy. For example, Nellis Air Force Base in southern Nevada built a 14- megawatt (MW) photovoltaic solar array using a public-private partnership. More than 72,000 solar panels track the sun to generate 30 million kilowatt-hours of electricity per year— equivalent to a quarter of the total power used at the 12,000-person base. Nellis saves $1 million a year in electricity costs and avoids 24,000 tons of carbon dioxide emissions. In October, the U.S. Army Corps of Engineers signed an agreement with two private companies to develop a 500-MW solar power plant at Fort Irwin in California’s Mojave Desert. The plant will be built using an Enhanced Use Lease—a mechanism that allows the private partners to finance the estimated $1.5 billion in capital costs. The military’s interest in renewable energy is nothing new. Naval Air Weapons Center China Lake in California has been operating a 270-MW geothermal plant since 1987. The heat from 166 wells, some of them 12,000 feet deep, is sufficient to light up 180,000 homes. The Navy is helping the Army tap into geothermal resources at its Weapons Depot in Hawthorne, Nevada, and that project will be capable of producing 30 MW of clean power.

## 1NC Politics

#### 1. CIR will pass now

Politico 3/27 (http://www.politico.com/politico44/2013/03/obama-renews-push-on-immigration-reform-160372.html)

President Obama sought to refocus the political conversation on immigration reform Wednesday in interviews with two Spanish-language networks that come after weeks of news cycles dominated by discussions of guns, sequestration and same-sex marriage.¶ In interviews with Telemundo and Univision conducted Wednesday at the White House, the president stayed firm on the immigration reform timeline he set earlier this year and voiced confidence in the bipartisan group of eight senators who are negotiating a bill.¶ “I think we’ve seen enormous progress over the last month and a half,” Obama said in an interview with Telemundo. “I think both sides, Democrats and Republicans, have been very serious about the negotiations. I’m actually very optimistic that when they return in early April … we’ll see a bill ready to move through the process.”¶ "We're seeing right now a good, bipartisan spirit. I want to encourage that," he added on Univision. "Hopefully we'll be able to get it done."

#### 2. Obama’s capital is key to holding the coalition together

Bloomberg 3/22 (Guest-Worker Visas Sticking Point on Immigration Rewrite, http://www.bloomberg.com/news/2013-03-21/guest-worker-visas-sticking-point-on-immigration-rewrite.html)

With Senate Republicans and Democrats moving closer to an agreement to grant a chance at U.S. citizenship to 11 million undocumented immigrants, a long- simmering dispute between organized labor and the business lobby risks sapping momentum for the measure.¶ The two constituencies are at odds over a new program to provide U.S. work visas to low-skilled foreign workers, placing pressure on lawmakers poised for a compromise. Unions are pressing for a limited visa system that guarantees better wages for future immigrant workers, while businesses seek a broader program more responsive to their hiring needs.¶ It’s the tougher side of what is otherwise a broadening consensus in both parties around an immigration plan, whose centerpiece is a path to U.S. citizenship for undocumented immigrants. A bipartisan group of eight senators is nearing a deal to bolster border security and workplace verification while revamping the legal immigration system.¶ Republican Senator Marco Rubio of Florida, a member of the group, called the guest-worker issue “one of the more difficult parts” of the negotiations.¶ “I’m not going to be part of a bill that doesn’t create a process whereby people can come to this country temporarily in the future if we need them,” Rubio said yesterday. “There’s no secret that the broader labor movement, with some exceptions, would rather not even have an immigration bill.”¶ Political Consequences¶ The disagreement carries significant political consequences for Republicans and Democrats alike, essentially making them choose between their strongest constituencies -- organized labor for Democrats and big business for Republicans -- and achievement of an overriding policy goal that both parties increasingly see as an electoral imperative.¶ Hispanics accounted for 10 percent of voters in the 2012 presidential election. President Barack Obama won 71 percent of their votes, and just 27 percent backed Republican nominee Mitt Romney, who had proposed “self-deportation” for undocumented immigrants. Since then, a growing chorus of Republicans has publicly backed legal status for undocumented immigrants.¶ Meanwhile, a group of Republican officials who unveiled a top-to-bottom review this week called for the party to back “comprehensive immigration reform” or see its appeal shrink.¶ “It is in neither party’s interest for one group within a party to stop this, because it is bad for the economy if we don’t have immigration reform,” former Mississippi Governor and Republican National Committee Chairman Haley Barbour said this week, referring to labor unions’ objections to a guest-worker program.¶ Worker Program¶ Former Pennsylvania Governor Ed Rendell, a Democrat co- chairing an immigration task force with Barbour at the Bipartisan Policy Center in Washington, said it is ultimately up to Obama to persuade Democrats not to abandon the bill if the immigrant-worker program doen’t match the unions’ agenda.¶ “If we don’t get guest-worker provisions that are exactly in line with what labor wants, we can’t hold up the bill because of that,” Rendell said. “We’ve got to do the best we can to preserve and protect the interests of organized labor, but in the end you can’t always get what you want.”¶ The president, he added, has “his work cut out for him.”¶ The bipartisan plan, expected to be unveiled early next month following a two-week congressional break, also faces a potentially rough road in the Senate and uncertain fate in the House, where Republican opposition to granting citizenship to undocumented immigrants is more prevalent.¶

#### 3. SMRs costs capital --- they’re massively unpopular.

Fairley 10

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

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

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

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

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

#### 5. US/India relations averts South Asian nuclear war.

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

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

## 1NR – Politics DA

#### DA outweighs the case ---

#### Escalation is highly probable.

Geller 5 (Daniel S. – Professor and Chair of the Department of Political Science at Wayne State University, The India-Pakistan Conflict: An Enduring Rivalry, Ed. T. V. Paul, p. 99)

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

#### That escalation has a high probability of being nuclear.

Raghavan 1 (Fall-Winter, Lieutenant General V. R. – former Director General of Military Operations for India, Limited War and Nuclear Escalation in South Asia, The Nonproliferation Review, p. 1)

The status of India and Pakistan as declared nuclear powers with growing nuclear arsenals has raised the risks of a nuclear exchange between them, if the two countries engage in a large military conflict. The political leadership in both countries does not seem to have fully grasped the implications of nuclear weapons in relation to the ongoing conflict in Jammu and Kashmir. This conflict could lead to a limited war, as it has triggered three wars in the past. The risks involved in fighting a limited war over the Kashmir issue and the potential for such a war to escalate into a nuclear exchange are at best inadequately understood, and at worst brushed aside as an unlikely possibility. Despite this official stance, however, a close examination of Indian and Pakistani military and nuclear doctrine reveals elements that could contribute to the rapid escalation of a limited war to include nuclear weapons. Strikingly, India and Pakistan have not revealed warfighting doctrines for the post-1998 condition of nuclear weapons readiness. It is not clear, for example, what threats to its security would compel India to declare a state of war with Pakistan. There is also no indication of the circumstances that would induce Pakistan to seek a larger war with India. The political objectives that a limited war might seek to achieve have also not been articulated in official and public discourse in the two countries. This article examines the possibility of limited war between India and Pakistan, and the potential of such a conflict triggering a nuclear war. It examines the considerations that could push each of the two countries to fight a limited war. It discusses how such a war might be waged and the circumstances that would likely precipitate an escalation to a nuclear exchange. The doctrinal beliefs and decisionmaking processes of the two countries are examined to trace the likely escalatory spiral towards a nuclear war. The article concludes that the probability of a nuclear war between India and Pakistan is high in the event the two countries engage in a direct military conflict.

#### Disad turns solvency -

#### a. current immigration law endangers all innovation – reform is key

McCraw, professor emeritus at Harvard Business School, 11/1/2012

(Thomas, “Innovative Immigrants,” <http://www.nytimes.com/2012/11/02/opinion/immigrants-as-entrepreneurs.html?pagewanted=all>)

SOME 70 million **immigrants** have come to America since the first colonists arrived. The role their labor has played in economic development is widely understood. Much less familiar is the extent to which their remarkable **innovations have driven American prosperity**. Indeed, while both Barack Obama and Mitt Romney have lauded entrepreneurship, innovation and “job creation,” neither candidate has made comprehensive immigration reform an issue, despite immigrants’ crucial role in those fields. Yet understanding how **immigrants have fueled innovation through history** is critical to making sure they continue to drive prosperity in the future. At the country’s beginning, the three most important architects of its financial system were immigrants: Alexander Hamilton, from St. Croix, then part of the Danish West Indies; Robert Morris, born in Liverpool, England; and Albert Gallatin of Geneva. Morris was superintendent of finance during the Revolutionary War, using every resource at his command to support the army in the field. Hamilton, as the first secretary of the Treasury, rescued the country from bankruptcy and designed its basic financial system. Gallatin paid down much of the national debt, engineered the financing of the Louisiana Purchase and remains the longest-serving Treasury secretary ever. Immigrants’ financial innovations continued through the 19th century. In 1808 Alexander Brown, from Ireland, founded the nation’s first investment bank, and his immigrant sons set up Brown Brothers. The Lehman brothers, from Germany, began as dry-goods merchants and cotton brokers in Alabama, then moved to New York just before the Civil War and eventually founded a bank. Many other immigrants, including Marcus Goldman of Goldman Sachs, followed similar paths, starting very small, traveling to new cities and establishing banks. Meanwhile, “Yankee” firms like Kidder, Peabody and Drexel, Morgan — whose partners were native-born — remained less mobile, tied by family and high society to Boston and New York. Immigrant innovators were pioneers in many other industries after the Civil War. Three examples were Andrew Carnegie (Scotland, steel), Joseph Pulitzer (Hungary, newspapers) and David Sarnoff (Russia, electronics). Each came to America young, poor and full of energy. Carnegie’s mother brought the family to Pittsburgh in 1848, when Andrew was 12. He became a bobbin-boy in a textile mill, a telegram messenger, a telegraph-key operator, a low-level manager at the Pennsylvania Railroad, a division superintendent for the same railroad and a bond salesman for the railroad in Europe. Recognizing the limitless market for the rails that carried trains, Carnegie jumped to steel. His most important innovation was “hard driving” blast furnaces, wearing them out quickly. This violated the accepted practice of “coddling” furnaces, but he calculated that his vastly increased output cut the price of steel far more than replacing the furnaces cost his company. In turn, an immense quantity of cheap steel found its way into lucrative new uses: structural steel for skyscrapers, sheet steel for automobiles. Pulitzer was the home-tutored son of a prosperous Hungarian family that lost its fortune. He came to the United States in 1864 at age 17, recruited by a Massachusetts Civil War regiment. Penniless after the war ended, he went to St. Louis, a center for German immigrants, whose language he spoke fluently. He worked as a waiter, a railroad clerk, a lawyer and a reporter for a local German newspaper, part of which he eventually purchased. In 1879, he acquired two English-language papers and merged them into The St. Louis Post-Dispatch. In 1883, he moved to New York, where he bought The New York World and began a fierce competition with other New York papers, mainly the Sun and, later, William Randolph Hearst’s New York Journal. The New York World was pro-labor, pro-immigration and, remarkably, both serious and sensationalist. It achieved a huge circulation. Sarnoff was just 9 years old when he arrived from Russia in 1901. He earned money selling Yiddish newspapers on the street and singing at a synagogue, and then worked as an office clerk, a messenger and, like Carnegie, a telegraph operator. From there he became part of the fledgling radio firm RCA and rose rapidly within its ranks. Sarnoff was among the first to see radio’s potential as “point-to-mass” entertainment, i.e., broadcasting. He devoted a huge percentage of profits to research and development, and won an epic battle with CBS over industry standards for color TV. For decades, RCA and electronics were practically synonymous. As these men show, **one of the key traits of** immigrant **innovators is geographic mobility**, both from the home country and within the United States. Consider the striking roster of 20th-century immigrants who led the development of fields like movies and information technology: the Hollywood studios MGM, Warner Brothers, United Artists, Paramount and Universal; the Silicon Valley companies Intel, eBay, Google, Yahoo and Sun Microsystems. The economist Joseph Schumpeter — yet another immigrant, and the most perceptive early analyst of innovation — considered it to be the fundamental component of entrepreneurship: “The typical entrepreneur is more self-centered than other types, because he relies less than they do on tradition and connection” and because his efforts consist “precisely in breaking up old, and creating new, tradition.” For that reason, innovators always encounter resistance from people whose economic and social interests are threatened by new products and methods. Compared with the native-born, who have extended families and lifelong social and commercial relationships, **immigrants without** such ties — without businesses to inherit or family **property to protect** — **are** in some ways **better prepared to play** the i**nnovator**’s role. A hundred academic monographs could not prove that immigrants are more innovative than native-born Americans, because each spurs the other on. **Innovations by the blended population** were, and still **are**, **integral to the economic growth of the** United States. **But our** overly complex **immigration law hampers** even the most obvious **innovators**’ efforts to become citizens. **It endangers our tradition of entrepreneurship**, and it must be repaired — soon.

#### Turns solvency - Reforms key to energy development -- skilled labor shortage crushes aff otherwise

**COC, ‘9**

[COMPETE – Council on Competitiveness, “Mobilizing a World-Class Energy Workforce,” Dec., http://www.compete.org/images/uploads/File/PDF%20Files/CoC\_-\_Pillar\_6\_Handout\_-\_Mobilizing\_a\_World-Class\_Energy\_Workforce,\_Dec09.pdf]

**America currently lacks an energy workforce of sufficient size and capabilities to meet the needs of a sustainable, secure energy system**.1 **With increasing demand come abundant job opportunities in both traditional and emerging energy industries. Unfortunately, U.S. workers are neither aware nor sufficiently prepared to take them**. Moreover, **with an aging population and the retirement of the baby boomers well under way, there is an inadequate pipeline of replacement workers, technicians and managers to succeed them.** Bridge the Skills Gap and Build the Talent **The Council Recommends that:** • The U.S. Government offer full scholarships to U.S. graduates who commit to a minimum period of service in an energy-related career in the governmental, academic or non-profit sectors. • Congress establish a CompetePass program that will allow eligible participants to redeem the passes at U.S. Department of Labor (DOL) one-stop training centers. • **The U.S. Government grant green cards to foreign students receiving undergraduate and advanced degrees in scientific and engineering disciplines from U.S. institutions. The United States stands to lose half of its electric power industry workforce within the next five to ten years due to retirement**. America’s oil and gas workforce averages 50 years in age; half are likely to retire soon. Workers in these conventional energy sector jobs, from power plant operators to transmission line and pipeline workers, are retiring at a much faster rate than they are being replaced. The introduction of any new energy technologies will not compensate for this workforce shortage. For example, **in the nuclear industry, the fact that there has been no new construction of a nuclear facility in the United States in over 30 years has led to the atrophy of skills, the loss of technicians, the dearth of American students in nuclear engineering and a national security risk for the primarily nuclear-powered U.S. Navy**. 2 **The development, installation and maintenance of new technologies require skills at all levels of educational training. Many of these jobs, such as building new power plants, cannot be exported and will remain in the United States.** So-called “green collar” jobs could fill this gap over time and provide for significant domestic employment growth, but **capitalizing on this opportunity will require government being proactive in developing programs to provide the necessary skills**. Government should provide a 21st century education to match the 21st century job opportunities, requirements and needs. **There is growing global competition for scientific and engineering talent today, and the U.S. pipeline of students is slowing**.3 The private sector, where the overwhelming majority of careers will be, knows best the current opportunities that are not being met. **Executives cite the lack of scientific, engineering and skilled talent as among the most serious challenges facing their businesses today**.4 **They know what skills will be required and can assist in developing the workforce of the future by working closely with educational institutions as well as within their own organizations**.

#### Turns heg - Immigration reform is key to both hard and soft power

Nye, ‘12 --- Harvard Prof and former US assistant secretary of defense, state and chairman of the US National Intelligence Council (12/10/2013, “Immigration and American Power,” <http://www.project-syndicate.org/commentary/obama-needs-immigration-reform-to-maintain-america-s-strength-by-joseph-s--nye>)

CAMBRIDGE – The United States is a nation of immigrants. Except for a small number of Native Americans, everyone is originally from somewhere else, and even recent immigrants can rise to top economic and political roles. President Franklin Roosevelt once famously addressed the Daughters of the American Revolution – a group that prided itself on the early arrival of its ancestors – as “fellow immigrants.” In recent years, however, US politics has had a strong anti-immigration slant, and the issue played an important role in the Republican Party’s presidential nomination battle in 2012. But Barack Obama’s re-election demonstrated the electoral power of Latino voters, who rejected Republican presidential candidate Mitt Romney by a 3-1 majority, as did Asian-Americans. As a result, several prominent Republican politicians are now urging their party to reconsider its anti-immigration policies, and plans for immigration reform will be on the agenda at the beginning of Obama’s second term. Successful reform will be an important step in preventing the decline of American power.Fears about the impact of immigration on national values and on a coherent sense of American identity are not new. The nineteenth-century “Know Nothing” movement was built on opposition to immigrants, particularly the Irish. Chinese were singled out for exclusion from 1882 onward, and, with the more restrictive Immigration Act of 1924, immigration in general slowed for the next four decades. During the twentieth century, the US recorded its highest percentage of foreign-born residents, 14.7%, in 1910. A century later, according to the 2010 census, 13% of the American population is foreign born. But, despite being a nation of immigrants, more Americans are skeptical about immigration than are sympathetic to it. Various opinion polls show either a plurality or a majority favoring less immigration. The recession exacerbated such views: in 2009, one-half of the US public favored allowing fewer immigrants, up from 39% in 2008. Both the number of immigrants and their origin have caused concerns about immigration’s effects on American culture. Demographers portray a country in 2050 in which non-Hispanic whites will be only a slim majority. Hispanics will comprise 25% of the population, with African- and Asian-Americans making up 14% and 8%, respectively. But mass communications and market forces produce powerful incentives to master the English language and accept a degree of assimilation. Modern media help new immigrants to learn more about their new country beforehand than immigrants did a century ago. Indeed, most of the evidence suggests that the latest immigrants are assimilating at least as quickly as their predecessors. While too rapid a rate of immigration can cause social problems, over the long term, immigration strengthens US power. It is estimated that at least 83 countries and territories currently have fertility rates that are below the level needed to keep their population constant. Whereas most developed countries will experience a shortage of people as the century progresses, America is one of the few that may avoid demographic decline and maintain its share of world population. For example, to maintain its current population size, Japan would have to accept 350,000 newcomers annually for the next 50 years, which is difficult for a culture that has historically been hostile to immigration. In contrast, the Census Bureau projects that the US population will grow by 49% over the next four decades. Today, the US is the world’s third most populous country; 50 years from now it is still likely to be third (after only China and India). This is highly relevant to economic power: whereas nearly all other developed countries will face a growing burden of providing for the older generation, immigration could help to attenuate the policy problem for the US.In addition, though studies suggest that the short-term economic benefits of immigration are relatively small, and that unskilled workers may suffer from competition, skilled immigrants can be important to particular sectors – and to long-term growth. There is a strong correlation between the number of visas for skilled applicants and patents filed in the US. At the beginning of this century, Chinese- and Indian-born engineers were running one-quarter of Silicon Valley’s technology businesses, which accounted for $17.8 billion in sales; and, in 2005, immigrants had helped to start one-quarter of all US technology start-ups during the previous decade. Immigrants or children of immigrants founded roughly 40% of the 2010 Fortune 500 companies. Equally important are immigration’s benefits for America’s soft power. The fact that people want to come to the US enhances its appeal, and immigrants’ upward mobility is attractive to people in other countries. The US is a magnet, and many people can envisage themselves as Americans, in part because so many successful Americans look like them. Moreover, connections between immigrants and their families and friends back home help to convey accurate and positive information about the US. Likewise, because the presence of many cultures creates avenues of connection with other countries, it helps to broaden Americans’ attitudes and views of the world in an era of globalization. Rather than diluting hard and soft power, immigration enhances both. Singapore’s former leader, Lee Kwan Yew, an astute observer of both the US and China, argues that China will not surpass the US as the leading power of the twenty-first century, precisely because the US attracts the best and brightest from the rest of the world and melds them into a diverse culture of creativity. China has a larger population to recruit from domestically, but, in Lee’s view, its Sino-centric culture will make it less creative than the US. That is a view that Americans should take to heart. If Obama succeeds in enacting immigration reform in his second term, he will have gone a long way toward fulfilling his promise to maintain the strength of the US.

#### Two other impacts in 1NC – we’ll impact them here –

#### Chinese economic growth prevents global nuclear war

Kaminski 7 (Antoni Z., Professor – Institute of Political Studies, “World Order: The Mechanics of Threats (Central European Perspective)”, Polish Quarterly of International Affairs, 1, p. 58)

As already argued, the economic advance of China has taken place with relatively few corresponding changes in the political system, although the operation of political and economic institutions has seen some major changes. Still, tools are missing that would allow the establishment of political and legal foundations for the modem economy, or they are too weak. The tools are efficient public administration, the rule of law, clearly defined ownership rights, efficient banking system, etc. For these reasons, many experts fear an economic crisis in China. Considering the importance of the state for the development of the global economy, the crisis would have serious global repercussions. Its political ramifications could be no less dramatic owing to the special position the military occupies in the Chinese political system, and the existence of many potential vexed issues in East Asia (disputes over islands in the China Sea and the Pacific). A potential hotbed of conflict is also Taiwan's status. Economic recession and the related destabilization of internal policies could lead to a political, or even military crisis. The likelihood of the global escalation of the conflict is high, as the interests of Russia, China, Japan, Australia and, first and foremost, the US clash in the region.

#### Indian economic growth is crucial to stabilize South Asia – solves their China impact.

Garten 95 (Jeffrey, Under Secretary of Commerce for International Trade, FDCH, 3-7, Lexis)

Paramount among those interests are the commercial opportunities that are increasingly at the heart of the Clinton Administration's foreign policy. But it is impossible to separate those commercial interests from our broader interests. Economic reforms enable our companies to take advantage of the opportunities within the Indian market and enable Indian companies to better enter the global marketplace. Economic growth in India is a powerful stabilizing force in a region of the world where stability is of Supreme importance. Stability and growth in India are of enormous importance through southern Asia, from the Middle East to Indochina. Peace and prosperity in that part of the world are essential to the peace and prosperity of the world.

### A2: Altman

#### 2AC #1 – they say it won’t pass and read Altman – Altman is just a laundry list of potential problems with no warrant. Not conclusive that it won’t pass.

#### Will pass – Cantor – answers House GOP argument.

Politico 3/28 (http://www.politico.com/story/2013/03/eric-cantor-immigration-89423.html#ixzz2OsUZYNOz)

The No. 2 House Republican said Thursday that comprehensive immigration reform would be a “tall order” in Washington, but expressed optimism a deal is possible.¶ House Majority Leader Eric Cantor, appearing on Fox News on Thursday, likened immigration to other contentious issues including Obamacare and the Middle East peace process.¶ “But I will say, we’ve got an opportunity to come together on one point, and that is the kids,” Cantor said, voicing preference for a smaller-scale immigration fix. “If a kid was brought here by his parents or her parents, unbeknownst to them, and knows no other place … than America as home, why wouldn’t we want to give them a path to citizenship, and I think we should.”¶ Cantor’s view could help pierce the secrecy of House negotiations on immigration. The Virginia Republican is in charge of the House floor, charting action for legislation to move through the chamber, and has been briefed on where bipartisan talks stand in his chamber.¶ A large group of Republicans and Democrats have been in lengthy talks to overhaul the nation’s immigration laws. Republicans in the group include Reps. Mario Diaz-Balart of Florida, Sam Johnson and John Carter of Texas and Raul Labrador of Idaho. Democrats include Luis Gutierrez of Illinois, Xavier Becerra and Zoe Lofgren of California and John Yarmuth of Kentucky.¶ On Fox News, Cantor said there is “a lot of interest” in D.C. in finding a way to craft legislation that would help foster immigration, while “upholding the law.”¶ “Weighing these two things, I think that we can come to some agreement,” Cantor said.

#### Will pass – Obama can overcome any Gang of Eight difficulties.

Washington Post 3/25 (http://www.washingtonpost.com/politics/obama-demands-congress-finish-the-job-on-immigration-reform/2013/03/25/85a6a24c-955c-11e2-b6f0-a5150a247b6a\_story.html)

President Obama helped swear in 28 new U.S. citizens at the White House on Monday, hailing them as examples of the nation’s strong immigrant history and demanding that Congress “finish the job” on a comprehensive overhaul of immigration laws.¶ “Immigration makes us stronger — it keeps us vibrant, it keeps us hungry, it keeps us prosperous,” Obama said during a ceremony in the East Room that included 13 immigrants who are members of the U.S. military.¶ “We need to do a better job welcoming them,” the president continued. “We’ve known for years that our immigration system is broken. . . . After avoiding the problem for years, the time has come to fix it once and for all.”¶ Obama has participated in a naturalization ceremony at the White House for each of the past four years, but Monday’s event took on heightened symbolism. He read a list of countries that the immigrants hailed from — including Afghanistan, Germany, Mexico, Nigeria and Peru — and some wore their U.S. military uniforms.¶ Obama praised bipartisan efforts in the Senate and House to develop legislation and said he expects a bill to be introduced next month.¶ A group of eight senators — four Republicans and four Democrats — has said it hopes to unveil a bill after the Senate returns from a two-week Easter break on April 8, although labor and business leaders remain at loggerheads over a proposed guest worker program.¶ The effort — which is widely expected to serve as the template for a potential deal between Congress and the White House — will include a 13-year path to citizenship for the nation’s 11 million illegal immigrants, a large increase in visas for high-tech workers, the guest worker program for low-wage foreigners and the elimination of some categories of visas for extended family members, according to people familiar with the negotiations.¶ The legislation will also call for increased border control and workplace security measures.¶ “Everyone pretty much knows what’s broken. Everyone knows how to fix it,” Obama said. “We’ve just got, at this point, to work up the political courage to do what’s required to be done.”

#### Will pass – vote count.

Real Clear Politics 3/26 (http://www.realclearpolitics.com/articles/2013/03/26/obama\_expects\_april\_senate\_debate\_on\_immigration\_117644.html)

Some reform advocates have sounded increasingly upbeat that 60 votes, or perhaps more, will turn up in the Senate for immigration changes that create a set pathway to citizenship, or a green card, within a chamber composed of 53 Democrats, 45 Republicans, and two independents who vote with the majority.¶ On Monday, White House Deputy Press Secretary Josh Earnest said the administration is “going to reserve judgment on the final product until it's presented, but we're pleased that they say that they're on track to present it shortly after they return from their Easter recess.”

#### Will pass – comments by lawmakers

Real Clear Politics 3/26 (http://www.realclearpolitics.com/articles/2013/03/26/obama\_expects\_april\_senate\_debate\_on\_immigration\_117644.html)

With an eye on the calendar while lawmakers are out of town for two weeks, President Obama on Monday used a White House ceremony welcoming 28 new U.S. citizens as a backdrop to urge Congress to take up immigration reform legislation next month.¶ “We’ve just got . . . to work up the political courage to do what’s required to be done,” the president said in the East Room. “I expect a bill to be put forward. I expect the debate to begin next month. I want to sign that bill into law as soon as possible.”¶ The president said earlier this year he would introduce his own immigration bill if Congress did not produce one. Since then, he’s awaited the unveiling of a bipartisan Senate reform measure that key negotiators, led by Sen. Chuck Schumer, initially hoped to introduce in early March and recently said would emerge sometime after lawmakers return to Washington on April 6.¶ Schumer, a New York Democrat, has said the group has ironed out the majority of sticking points in drafting a bill that would create a pathway to citizenship for an estimated 11 million undocumented immigrants, ensure border security, embrace a guest-worker program, and improve the existing immigration system so that it can support the changes reformers have in mind.¶ The administration has hailed recent comments by lawmakers -- those in favor of citizenship for illegal immigrants (which is the president’s goal), as well as legalization (the preference of some Senate conservatives) -- as evidence that a centerpiece of Obama’s second-term agenda will eventually reach the floors of the House and Senate, and could produce new law by the end of the year.¶ “There are bipartisan groups in both the House and the Senate working to tackle this challenge, and I applaud them for that,” Obama said as he headlined a naturalization ceremony that included active-duty military service members as well as civilians. “We are making progress, but we’ve got to finish the job, because this issue is not new. Everyone pretty much knows what’s broken. Everybody knows how to fix it,” he added.

### A2: Intrinsicness

#### 2AC #2 - They say DA is not intrinsic - Intrinsicness is illegitimate and a voting issue:

#### 1. Moving target—the affirmative gets infinite prep to write the most strategic plan, allowing revisions after they have heard our strategy is unfair

#### 2. Moots negative ground—most disads can be resolved through US action- there is no logical limit

#### 3. Infinite regression—If we read a disad to the intrinsicness argument they can make another to get out of it

#### 4. Counter interpretation: the affirmative can make topical intrinsicness arguments—this provides the best middle ground and maintains resolutional focus. Non topical intrinsicness arguments are unlimiting and disprove the necessity of the resolution.

### A2: Border Security

#### 2AC #3 – they say that border security takes out the DA – extend ev from above and UQ evidence. Cooperation now is paving a way through a lot of controversial issues. Their ev is not even conclusive on it killing the bill.

### A2: Thumpers

#### Group 2AC #4-7 – they say that other issues thump – be very skeptical of their evidence. It’s good on talking about controversy but it’s not comparative to preventing immigration reform from passing or a dedicated fight.

#### Our uniqueness evidence assumes their thumpers – given the current political climate, Obama has enough political capital to get immigration reform passed.

#### Immigration is the top agenda item

USA Today 3/22 (Congress turns to domestic policy after budget battleshttp://www.usatoday.com/story/news/politics/2013/03/21/budget-congress-recess-immigration-guns/2006219/)

WASHINGTON — A brief reprieve in the fiscal battles between President Obama and a divided Congress will allow two contentious and politically divisive domestic issues — guns and immigration — to take center stage in the national debate this spring.¶ The ability for Washington to find solutions to either issue will require the kind of bipartisan cooperation and common ground the president and congressional leaders have been unable to find on the budget.¶ In other words: It won't be easy.¶ The push to strengthen the nation's gun laws has been fueled by public pressure for legislative action in the wake of the Sandy Hook Elementary School massacre in Newtown, Conn., that left 20 schoolchildren and six educators dead.¶ MORE: Tracking President Obama's State of the Union proposals and pledges¶ Renewed interest in overhauling the nation's immigration laws, and how or whether to create a path to citizenship for about 11 million undocumented residents, was sparked after the election in 2012 saw Hispanic voters siding with Obama over the GOP by 3-to-1.¶ Congress will turn to both issues this spring after approving competing budget resolutions and a short-term spending bill this week to avert a government shutdown through Sept. 30. The action temporarily lessens the intensity of the two-year-plus fiscal drama with President Obama until mid- to late summer, when Congress will have to again vote on increasing the debt ceiling, the nation's borrowing authority.

#### Immigration is top of the docket

USA Today 3/24 (http://www.usatoday.com/story/theoval/2013/03/24/obama-immigration-republicans-napolitano/2014581/)

Fresh off his Middle East trip, President Obama returns to domestic issues this week, starting with immigration.¶ Obama is scheduled to speak Monday at a naturalization ceremony for active-duty servicemembers and civilians at the White House.¶ The president, who returned to the White House on Saturday night from a journey to Israel and Jordan, is expected to again advocate what he calls "comprehensive immigration reform."¶ It would combine tighter border enforcement with a pathway to citizenship for illegal immigrants who are already in the United States

#### Biden is taking the lead on guns - Obama is focused on immigration

Washington Post 3/1 (Obama to refocus attention on immigration, gun control, http://www.washingtonpost.com/politics/obama-to-refocus-attention-on-immigration-gun-control/2013/03/01/64fbe2d0-81ef-11e2-a350-49866afab584\_story.html)

In the meantime, the administration has tried to remain engaged via less high-profile means. Vice President Biden made policy speeches and met with advocates on gun control, and Obama used phone calls to Capitol Hill and a private Oval Office meeting with two

### A2: Executive Shields

#### 2AC #8 – they say that the executive shields – our link evidence is about SMRs being controversial and their development regardless of who’s doing it. This is a reason why the CP doesn’t link.

#### Situating SMRs specifically in the military drains capital.

Erwin, Editor of National Defense Magazine, ‘11

[Sarah, “Defense Energy: Small, Incremental Steps Do Better Than Sweeping Reforms,” National Defense Magazine, September, http://www.nationaldefensemagazine.org/archive/2011/September/Pages/DefenseEnergySmall,IncrementalStepsDoBetterThanSweepingReforms.aspx]

Kevin Geiss, deputy assistant secretary of the Air Force for energy, laid some blame for the slow pace of energy reform on the Pentagon’s budgeting culture. Energy investments take years to pay off, he told reporters. Budget officials at the Defense Department typically are not willing to spend today’s dollars on something that would produce savings beyond the five-year spending blueprint known as “future years defense plan,” or FYDP. “There’s that struggle that the payback is not going to give you money to move around the FYDP,” Geiss said. “Those are very difficult discussions to have … but it is a discussion that we are having.”¶ The Air Force, like the other branches of the military, is a big proponent of alternative energy and has certified most of its aircraft to fly on a mix of JP-8 and biofuel or synthetic fuel. But Geiss acknowledged that the Defense Department is not going to have the money to pay premium prices for alternative fuels, so the military services are expecting the industry to bring costs down.¶ “There is no indication from Congress that there is going to be a special fund that they provide for us to pay extra for operational fuel,” he said. “The whole business model to make biofuels affordable is going to drive certain practices. Industry is going to have to sort that out.”

#### No risk of military link turn—not perceived as useful.

Erwin, Editor of National Defense Magazine, ‘11

[Sarah, “Defense Energy: Small, Incremental Steps Do Better Than Sweeping Reforms,” National Defense Magazine, September, http://www.nationaldefensemagazine.org/archive/2011/September/Pages/DefenseEnergySmall,IncrementalStepsDoBetterThanSweepingReforms.aspx]

The military’s energy goals are unlikely to be met until the United States adopts policies that recognize energy as a “national strategic need,” said retired Navy Adm. John Nathman, former vice chief of naval operations. “We need policy and legislation,” he said. The military services “have a lot of smart people working this problem,” but their efforts would be more wisely used if they were supporting a larger American goal to become less dependent on oil.¶ Private sector leaders also are cautiously pessimistic. “Industry is waiting to figure out whether this [alternative fuels] is a hobby or a reality for the DoD. … Only time will tell on that,” said David Morrison, a former senior House staff member and currently vice president for government operations at The Boeing Co. “We have to see if there is institutional and resource commitments,” he said.¶ Congress today has no appetite for big-energy policies, and despite widespread support for most military programs, legislators don’t put energy efficiency at the top of their list, said Morrison. “Congressional committees look at the DoD strategy and say, ‘Huh?’” Morrison said at a Center for Strategic and International Studies forum.¶ On Capitol Hill, defense officials face an audience that only has a “superficial understanding of the issues,” Morrison said.

### A2: SMRs Popular

#### SMRs unpopular – opposition due to fear of waste, contamination and terror targets.

Smith 10 (Rebecca, Contributor, “Small Reactors Generate Big Hopes”, The Wall Street Journal, 2-18-10, ¶ <http://www.generatorsystems.com/pdf/Small%20Reactors%20Generate%20Big%20Hopes%20WSJ%2002-18-2010.pdf>, accessed 8-1-12, RSR)

"We see significant benefits from the new, modular technology," said Donald Moul, vice president of nuclear support for First Energy, an Ohio-based utility company. He said First Energy, which operates four reactors at three sites in Ohio and Pennsylvania, has made no decision to build any new reactor and noted there's "a lot of heavy lifting to do to get this reactor certified" by the NRC for U.S. use. Indeed, the smaller reactors still could incite major opposition. They face the same unresolved issues of where to put the waste and public fear of contamination, in the event of an accident. They could also raise alarms about creating possible terrorism targets in populated areas. Still, the sudden interest in small reactors illustrates a growing unease with the route that nuclear power has taken for half a century. What many regard as the first commercial reactor built in the U.S., in 1957 at Shippingport, Pa., was only about 60 megawatts in size. By the time construction petered out three decades later, reactors had grown progressively bigger, ending up at about 1,000 megawatts of capacity.

### A2: Hirsch

#### – they say PC is not key and winners win - issue selection is key --- he can only get momentum if he starts with an issue like immigration where the public mood is changing. Overreaching with an unpopular issue empirically triggers backlash.

Hirsh, 2/7 --- Chief correspondent (2/7/2013, Michael, “There’s No Such Thing as Political Capital; The idea of political capital—or mandates, or momentum—is so poorly defined that presidents and pundits often get it wrong,” <http://www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207)>)

Consider, as another example, the storied political career of President Franklin Roosevelt. Because the mood was ripe for dramatic change in the depths of the Great Depression, FDR was able to push an astonishing array of New Deal programs through a largely compliant Congress, assuming what some described as near-dictatorial powers. But in his second term, full of confidence because of a landslide victory in 1936 that brought in unprecedented Democratic majorities in the House and Senate, Roosevelt overreached with his infamous Court-packing proposal. All of a sudden, the political capital that experts thought was limitless disappeared. FDR’s plan to expand the Supreme Court by putting in his judicial allies abruptly created an unanticipated wall of opposition from newly reunited Republicans and conservative Southern Democrats. FDR thus inadvertently handed back to Congress, especially to the Senate, the power and influence he had seized in his first term. Sure, Roosevelt had loads of popularity and momentum in 1937. He seemed to have a bank vault full of political capital. But, once again, a president simply chose to take on the wrong issue at the wrong time; this time, instead of most of the political interests in the country aligning his way, they opposed him. Roosevelt didn’t fully recover until World War II, despite two more election victories.

In terms of Obama’s second-term agenda, what all these shifting tides of momentum and political calculation mean is this: Anything goes. Obama has no more elections to win, and he needs to worry only about the support he will have in the House and Senate after 2014. But if he picks issues that the country’s mood will support—such as, perhaps, immigration reform and gun control—there is no reason to think he can’t win far more victories than any of the careful calculators of political capital now believe is possible, including battles over tax reform and deficit reduction.

Amid today’s atmosphere of Republican self-doubt, a new, more mature Obama seems to be emerging, one who has his agenda clearly in mind and will ride the mood of the country more adroitly. If he can get some early wins—as he already has, apparently, on the fiscal cliff and the upper-income tax increase—that will create momentum, and one win may well lead to others. “Winning wins.”

#### Missteps undermine capital more than victories replenish it

Anderson, 5 --- Phd candidate in Philosophy at Ohio State (William David, THE PRESIDENT’S AGENDA: POSITION-TAKING, LEGISLATIVE SUPPORT, AND THE PERSISTENCE OF TIME, DISSERTATION, Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University, <http://etd.ohiolink.edu/view.cgi/Anderson%20William%20David.pdf?osu1123169358>)

Expansionism and Protectionism

Besides policy congruence and taking advantage of policy windows, presidents build their personal skills while solidifying in their own minds the risks they are willing to accept as they take positions on bills and lobby before Congress. Like members of the House (Fenno 1978), presidents move through expansionist and protectionist periods during their administrations, with expansionist periods more likely to immediately follow the election when political capital is high and legislative deference more common. The president’s coalition is larger, and he has more latitude to even further expand that coalition—a tactic that may serve him well during the next electoral cycle. Presidential capital, however, erodes over time: a president’s mistakes during the term erode political capital more than victories replenish it, and activist presidents expose themselves to greater “capital risk” than reticent executives. Thus, the president’s accumulated legislative record from earlier in the term may harm his legislative and electoral chances later in the term (Light 1999). The early months of the first Clinton term illustrate how difficult it is to seize on the momentum elections provide. Clinton’s struggles with health care reform and his missteps with peripheral issues—that eventually harmed agenda items more germane to his presidential platform—suggest how important early presidential momentum is in shaping subsequent relations between Congress and the president.

### A2: Still High Skilled

#### Skilled workers tied to comprehensive reform, won’t be addressed separately

Higgins 2/6 (John K. Higgins is a career business writer, with broad experience for a major publisher in a wide range of topics including energy, finance, environment and government policy, “Immigration Reform Could Open the Door for IT Talent”, <http://www.ecommercetimes.com/story/77241.html>)

Congressional Hurdles and Outlook¶ How the bill fares in Congress may depend on how an overall comprehensive package of immigration reforms is handled.¶ "The Immigration Innovation Act could stand on its own, but in the current political situation it is unlikely that immigration issues will be handled piecemeal," Bob Sakaniwa, associate director of advocacy at the American Immigration Lawyers Association, told the E-Commerce Times. "The better prospect is that it will be included within a comprehensive package and its fate will be tied to what Congress does on the overall immigration reform effort."¶ The history of congressional immigration debates also indicates that the IT issue should be part of a comprehensive reform effort, LeDuc added. "As much as we might like, or it might seem practical to enact various reform initiatives independently, that's not a political reality at this time."¶ The momentum now exists for comprehensive immigration reform, and issues related to highly skilled workers have already made their way into bipartisan legislative language.¶ "We know that the attention of Congress will now be fully focused on achieving comprehensive reform and a complete bill in the next few months," Coffey said. "We're hoping that they succeed, and that's where our focus is."

#### Wrong – can’t have high skilled without pathway to citizenship

Ferenstein 12-1 (Gregory, “No Exceptions for Tech Industry: High Skilled Visas Now Tied to Comprehensive Reform,” Tech Crunch, 2012, http://techcrunch.com/2012/12/01/no-exceptions-for-tech-industry-high-skilled-visas-now-tied-to-comprehensive-reform/)

Powerful technology lobbies expected special treatment this week from Congress and got a tough lesson in rejection: there will be no more high-skilled work visas without comprehensive immigration reform. The probable failure of the STEMS Jobs Act, which would add 55,000 work visas for science-oriented immigrants, has become a casualty of war over the low-skilled immigrants dilemma.

### A2: Resilient Relations

#### Visa policy is dragging down US-India relations now – only CIR can reaffirm our alliance with India

Zee News 12 [“Krishna, Hillary to discuss visa fee hike in NY”, October 1st, 2012, <http://zeenews.india.com/news/nation/krishna-hillary-to-discuss-visa-fee-hike-in-ny_802978.html>]

New York: The issue of US visa fee hike, which has hurt several Indian IT firms, is expected to come up for discussion when External Affairs Minister SM Krishna meets US Secretary of State Hillary Clinton here on Monday on the sidelines of the UN General Assembly session. India has "consistently" taken up the issue of the visa fee hike with the US and the issue will figure in talks between Krishna and Clinton, official sources said. The US had raised visa fee in 2010 to fund its enhanced costs on securing border with Mexico under the Border Security Act. Some of the top Indian companies TCS, Infosys, Wipro and Mahindra Satyam were affected by the US action and India is expected to soon seek consultations with the US at the World Trade Organization (WTO) on the issue. The sources said that young Indian professionals working in the US have been the "cornerstone" of India-US relations and are a pillar in the improved bilateral relations that has brought the two countries closer. Hiking visa fees or limiting the number of work visas available to Indian companies is tantamount to "undermining that pillar and growth in India-US relations," they added. "Raising visa fees and putting other barriers is not in consonance with the forward thinking of growing bilateral ties," the sources said. This will be the third bilateral meeting between Krishna and Clinton this year. They had previously met in India in April and again in June in Washington. The sources said that the two countries have a fairly elaborate agenda and the visa issue is one of the issues in a broader relationship. Krishna will also address the 67th session of the UN General Assembly today.

**part of the world are** essential **to the peace and prosperity of the world.**

## 1NC Case

### Solvency

#### No commercialization.

Marqusee, Executive director at the Strategic Environmental Research and Development Program at the DOD, ‘12

[Jeffrey, “Military Installations and Energy Technology Innovations”, Energy Innovation at the Department of Defense: Assessing the Opportunities, March]

Decisions on implementing these technologies will be made in a distributed sense and involve tens of thousands of individual decision makers if they are ever to reach large-scale deployment. These are the energy technologies that DoD installations will be buying, either directly through appropriated funds or in partnership with third-party financing through mechanisms such as Energy Saving Performance Contracts (ESPCs) or Power Purchase Agreements (PPAs). In the DOE taxonomy shown above, these distributed installation energy technologies cover the demand space on building and industrial efficiency, portions of the supply space for clean electricity when restricted to distributed generation scale, and a critical portion in the middle where microgrids and their relationship to energy storage and electric vehicles reside.¶ There is an extensive literature on the impediments to commercialization of these emerging energy technologies for the building infrastructure market.82 A key impediment (and one found not just in the building market) is that energy is a cost of doing business, and thus rarely the prime mission of the enterprise or a priority for decision makers. In contrast to sectors such as information technology and biotechnology, where advanced technologies often provide the end customer with a new capability or the ability to create a new business, improvements in energy technology typically just lower the cost of an already relatively low-cost commodity (electricity). As a result, the market for new technology is highly price sensitive, and life-cycle costs are sensitive to the operational efficiency of the technology, to issues of maintenance, and to the estimated lifetime of the component. Thus, a first user of a new energy technology bears significantly more risk while getting the same return as subsequent users.¶ A second impediment is the slow pace of technological change in the U.S. building sector: it takes years, if not decades, for new products to achieve widespread use. One reason for this is that many firms in the industry are small; they lack the manpower to do research on new products, and they have limited ability to absorb the financial risks that innovation entails.¶ A third impediment to the widespread deployment of new technologies arises from the fragmented or distributed nature of the market; decisions are usually made at the individual building level, based on the perceived return on investment for a specific project. The structural nature of decision making and ownership can be a significant obstacle to technological innovation in the commercial market:¶ 􀁑 The entity that bears the up-front capital costs is often not the same as the one that reaps the operation and management savings (this is known as the “split incentives” or “principal agent” problem).¶ 􀁑 Key decision makers (e.g., architecture and engineering firms) face the liabilities associated with operational failure but do not share in the potential savings, creating an incentive to prefer reliability over innovation.¶ 􀁑 Financing mechanisms for both energy efficiency (by energy service companies using an ESPC) and distributed and renewable energy generation (through PPA and the associated financing entities) require high confidence in the long-term (decade-plus) performance of the technology, and thus investors are unwilling to put capital at risk on new technologies.¶ Other significant barriers to innovation include a lack of information, which results in high transactional costs, and an inability to properly project future savings. As the National Academy of Sciences has pointed out, the lack of “evidence based” data inhibits making an appropriate business case for deployment.83 The return on the capital investment is often in terms of avoided future costs. Given the limited visibility of those costs when design decisions are being made, it is often hard to properly account for them or see the return. This is further exacerbated by real and perceived discount rates that can lead to suboptimal investment decisions.¶ Finally, the lack of significant operational testing until products are deployed severely limits the rapid and complete development of new energy technologies. The impact of real-world conditions such as building operations, variable loads, human interactions, and so forth makes it very difficult to optimize technologies, and specifically inhibits any radical departure from standard practice. These barriers are particularly problematic for new energy efficiency technologies in the building retrofit market, which is where DoD has the greatest interest. In addition to these barriers, which are common across DoD and the commercial market, DoD has some unique operational requirements (security and information assurance issues) that create other barriers.

#### Low gas prices kill SMRs.

McMahon, energy contributor – Forbes,’12

[Jeff, 5-23-12, <http://www.forbes.com/sites/jeffmcmahon/2012/05/23/small-modular-reactors-by-2022-but-no-market-for-them/>]

Small Modular Nuclear Reactors By 2022 -- But No Market For Them The Department of Energy will spend $452 million—with a match from industry—over the next five years to guide two small modular reactor designs through the nuclear regulatory process by 2022. But cheap natural gas could freeze even small nuclear plants out of the energy market well beyond that date. DOE accepted bids through Monday for companies to participate in the Small Modular Reactor program. A number of reactor manufacturers submitted bids, including NuScale Power and a collaboration that includes Westinghouse and General Dynamic. “This would allow SMR technology to overcome the hurdle of NRC certification – the ‘gold standard’ of the international nuclear industry, and would help in the proper development of the NRC’s regulatory framework to deal with SMRs,” according to Paul Genoa, Senior Director of Policy Development at the Nuclear Energy Institute. Genoa’s comments are recorded in a summary released today of a briefing given to Senate staff earlier this month on prospects for small modular reactors, which have been championed by the Obama Administration. DOE defines reactors as SMRs if they generate less than 300 megawatts of power, sometimes as little as 25 MW, compared to conventional reactors which may produce more than 1,000 MW. Small modular reactors can be constructed in factories and installed underground, which improves containment and security but may hinder emergency access. The same summary records doubt that SMRs can compete in a market increasingly dominated by cheap natural gas. Nuclear Consultant Philip Moor told Senate staff that SMRs can compete if natural gas costs $7 to $8 per million BTU—gas currently costs only $2 per MBTU—or if carbon taxes are implemented, a scenario political experts deem unlikely. “Like Mr. Moor, Mr. Genoa also sees the economic feasibility of SMRs as the final challenge. With inexpensive natural gas prices and no carbon tax, the economics don’t work in the favor of SMRs,” according to the summary.

#### Licensing questions prevent solvency- takes too long

O’ Connor ’11 (Dan O’Connor is a Policy Fellow in AEL’s New Energy Leaders Project and will be a regular contributor to the website, American Energy League, “Small Modular Reactors: Miracle, Mirage, or Between?”, <http://leadenergy.org/2011/01/small-modular-reactors-miracle-mirage-or-medium/>, January 4, 2011, LEQ)

Judging only by this promising activity, it is tempting to dub the SMR a miracle. But the majority of these diverse designs have yet to be demonstrated. In fact, the demonstration stage of the South African project, Pebble Bed Modular Reactor (a HTR), stalled and faded in 2010 after losing government funding due to lack of customer interest. The importance of demonstration, especially in the highly-regulated US industry, cannot be overstated. But even in the stages before the crucial demonstration step, skepticism over the SMR’s promises abounds. The ASME EnComm noted regulatory, financial, operational, and logistical challenges. Treading the uncharted waters of Lego-like power plant construction will not be easy. In a traditional plant, one reactor provides heat for one or a few steam turbines. In an SMR-based plant, each module drives one turbine with its own controls and operators. As such, few of the costs associated with these systems scale down with reactor capacity. The turbines do not come in a complimentary plug-and-play form either – they would have to be built on site. And while decentralization enables partial operation and online refueling, it also introduces the challenge of module co-operation, the need for numerous highly-trained operator personnel, and brand new reviews by the Nuclear Regulatory Commission (NRC). This goes without mentioning the urgent and increased need for a more dynamic national approach to waste storage. Licensing questions remain too. The one-time approval of a module before its mass production, bypassing a regulatory damper for each unit, is a highly-desirable advantage of SMR design. But if a utility would like to increase its capacity over two decades by incrementally adding more modules, will it face the choice between building licensed, though dated, technology or waiting again for a license to build with state of the art modules? Furthermore, as addressed in my past article, “Putting the Cart Before the Horse with Nuclear R&D” and its comments, the waiting time even for a traditional design license is considerable. With each new SMR innovation, from an individualized control room to coolant choice, the licensing duration increases by as much as a decade, pushing the vital demonstration step further away. Additional costs associated with these regulatory complications and non-scalable systems could combine to nullify the SMR’s affordability argument.

#### Status quo solves – DoD already trying to procure SMR tech.

Barattino, chief executive officer at Global Broadband Solutions, ‘12

[William, “Small Modular Reactors on Military Installations?”, ANS Nuclear Café, 1-23-12,

<http://ansnuclearcafe.org/2012/01/23/small-modular-reactors-on-military-installations/>]

Federal agencies have been directed by public laws and executive orders to reduce energy consumption, increase usage of clean energy sources, and reduce greenhouse gas emissions (GHGs). The U.S. Department of Defense (DOD) is working with the U.S. Department of Energy to develop a long-term strategy to embrace and implement these directives for military installations that includes small modular reactors (SMRs) in the mix of clean energy technologies. This blog post provides an initial assessment of the market size of SMRs on U.S. Army installations located in the United States that includes background factors driving the shift to clean energy sources; characterization of energy consumption and costs for Army installations; maximum overnight costs for breakeven based on offsets of current base electricity costs; and reductions in GHGs with use of SMRs.

#### DOD subsidies distort the market—hollow out industry and destroys innovation

Erwin, reporter – National Defense Magazine, November ‘9

[Sandra I., “Industrial Policy Debate: Should The Pentagon Pick Winners and Losers?” <http://www.nationaldefensemagazine.org/archive/2009/November/Pages/IndustrialPolicyDebateShouldthePentagonPickWinnersandLosers.aspx>]

Industry executives and trade associations have called for the Defense Department to take preemptive action to protect key sectors that are considered of strategic importance to national security. That would require the Pentagon to continue to fund selected research-and-development programs even if those systems were not likely to be needed in the near future. Advocates of centrally planned industrial policy contend that unless the Pentagon decides ahead of time what sectors of the industry should be kept alive, budget cutbacks in major weapon systems will jeopardize portions of the industry that, once vanished, cannot easily be reconstituted if the United States needed to mobilize for a major war. U.S. Code Title 10 requires that the Defense Department consider the industrial implications of its major weapons program decisions, says defense industry analyst Joachim Hofbauer in a Center for Strategic and International Studies report. “Developing and collecting standardized metrics to measure the value of individual defense programs to the industrial base constitutes a crucial prerequisite for complying with this regulation. Yet, today the Department of Defense largely lacks such metrics,” says Hofbauer. But despite an abundance of laws that require defense industrial planning, the Pentagon historically has shown little appetite for picking winners and losers, and has been more comfortable with a laissez-faire approach. After the Cold War ended, the Defense Department stepped out of the way and for five years let contractors consolidate at will. The Pentagon finally drew the line in 1997 when it stopped the merger of industry giants Lockheed Martin and Northrop Grumman. A repeat of the mergers and acquisitions frenzy of the 1990s is improbable, considering how much smaller the industry is now. But the Pentagon still should be prepared to cope with the “industrial consequences” of future budget decisions, says Undersecretary of Defense for Acquisition, Technology and Logistics Ashton Carter. “We’d be fools to not pay attention to that,” he says during a recent Council on Foreign Relations talk in Washington, D.C. Industrial policy mandates have existed since the 1950s but most administrations have avoided picking winners and losers when budgets have gone south, says Gerald Abbott, directory of industry studies and professor emeritus at the Industrial College of the Armed Forces. “During the Reagan administration there was a time when if you used the word ‘industrial policy’ you got fired,” he says in an interview. The Pentagon essentially has three choices, Abbott says. It could only award contracts to companies that it wants to keep alive, it could return to the arsenal-style government-owned industry model, or it could treat defense contractors like public utilities by guaranteeing a certain amount of work and returns for investors. But none of these alternatives is ideal because they lock the government into a corner, says Abbott. “The trouble with industrial planning is that once the government writes up a list, it’s almost impossible to change the darn list.” A case in point is the U.S. national stockpile of critical materials. “Once you put something in the stockpile it is impossible to get it out even if it is no longer needed,” says Abbott. “You create a whole bunch of vested interests that want to continue to sell those materials to the government.” Another impediment to industrial planning is the power structure in Washington, he says. The largest five companies have far more influence than emerging smaller companies. “So if you did industrial planning you’d protect the old gorillas and not the young startups,” says Abbott. Under that scenario, “How do you encourage new companies with new technologies to enter the game?”

### Grid

#### No solvency—can’t find siting.

King et. al, ‘11

[Marcus (Project Director and Research Analyst for the Environment and Energy Team at Center for Naval Analyses); LaVar Huntzinger; Thoi Nguyen, “Feasibility of Nuclear Power on U.S. Military Installations", March,

<http://www.cna.org/sites/default/files/research/Nuclear%20Power%20on%20Military%20Installations%20D0023932%20A5.pdf>]

With respect to the requirement to “consider the potential impact on the quality of life of personnel stationed at military installations at which a nuclear power plant is installed and ways to mitigate those impacts,” it is impossible to talk in specific terms without knowing details about which specific power plant is being considered and the specific locations being considered. In general terms, finding an appropriate site will be challenging. Part of the reason finding an appropriate site will be challenging is because the NRC site consideration process will force full consideration of these factors. Describing the NRC site assessment process is the best and most relevant information that can be provided with respect to this aspect of feasibility at this stage in the process. The NRC approval process described in this section will require that any potential impacts on the quality of life of personnel stationed at military installations at which a nuclear power plant is proposed will be fully consdered and that ways are planned to mitigate those impacts.

#### SMRs cannot island bases.

King et. al, ‘11

[Marcus (Project Director and Research Analyst for the Environment and Energy Team at Center for Naval Analyses); LaVar Huntzinger; Thoi Nguyen, “Feasibility of Nuclear Power on U.S. Military Installations", March,

<http://www.cna.org/sites/default/files/research/Nuclear%20Power%20on%20Military%20Installations%20D0023932%20A5.pdf>]

There are several alternatives for the customer base served by a DoD nuclear power plant. The plant could be built for: • DoD as the exclusive user • Commercial users, but with DoD a priority user • Commercial users, including DoD Having DoD as the exclusive user is not practical for almost all DoD installations because even small nuclear power plants generate more power than is needed on almost all DoD installations. If a nuclear plant doesn’t operate near capacity the cost of the power it supplies increases, making the business case unattractive. Having a DoD installation, or a group of DoD installations, as a priority user would allow an SMR plant to better contribute to energy assurance for those installations served by the plant. The installations could continue to be connected to the commercial power grid. When operation of the SMR plant was interrupted for some reason, like maintenance or refueling, the commercial grid could supply the installation power. When the SMR plant is operational it could supply power, even when power from the commercial grid is not available. The principal advantages of an arrangement where DoD is among the commercial users supplied by the nuclear power plant is that it would be easier to reliably operate the plant at full capacity. If contract arrangements could give DoD installations priority access to power when there is an interruption in power supplied by the commercial grid, then DoD electrical power assurance would still be significantly improved. And the nuclear plant would have sufficient capacity to supply many other users in the vicinity of the installations as well. With a long-term power purchase agreement, this could provide reliable power at a stable cost. This kind of arrangement would almost certainly require additional distribution infrastructure and more advanced electrical network control.

#### Military operations prevent solvency.

King et. al, ‘11

[Marcus (Project Director and Research Analyst for the Environment and Energy Team at Center for Naval Analyses); LaVar Huntzinger; Thoi Nguyen, “Feasibility of Nuclear Power on U.S. Military Installations", March,

<http://www.cna.org/sites/default/files/research/Nuclear%20Power%20on%20Military%20Installations%20D0023932%20A5.pdf>]

DoD must also consider the potential effect of military training on reactor operations. Reactors must be designed to the criteria that no accidents at nearby military facilities may threaten nuclear plant safety [48]. NRC regulations note that accidents at nearby military facilities such as munitions storage areas and ordinance test ranges may threaten safety. Flight training is another area of concern. The NRC stipulates that nuclear plant developers should identify airports within 16 km, and the risks of potential incidents must be taken into consideration [48]. Hybrid concepts that include industrial facilities associated with nuclear reactors raise additional safety concerns.

#### Status quo solves islanding---the military figured out the problem and fixed it.

Aimone, 12

[9/12, Director, Business Enterprise Integration, Office of the Deputy Under Secretary of Defense (Installations and Environment), 9/12, Statement Before the House Committee on Homeland Security, Subcommittee on Cybersecurity, Infrastructure Protection and Security Technologies, http://homeland.house.gov/sites/homeland.house.gov/files/Testimony%20-%20Aimone.pdf]

DoD’s facility energy strategy is also **focused heavily on grid security** in the name of mission assurance. Although the Department’s fixed installations traditionally served largely as a platform for training and deployment of forces, in recent years they have begun to provide direct support for combat operations, such as unmanned aerial vehicles (UAVs) flown in Afghanistan from fixed installations here in the United States. Our fixed installations also serve as staging platforms for humanitarian and homeland defense missions. These installations are largely dependent on a commercial power grid that is vulnerable to disruption due to aging infrastructure, weather-related events, and potential kinetic, cyber attack. In **2008**, the Defense Science Board warned that DoD’s reliance on a fragile power grid to deliver electricity to its bases places critical missions at risk.1 Standby Power Generation **Currently**, DoD **ensures** that it can **continue mission critical activities** on base largely through its fleet of on-site power generation equipment. This equipment is **connected to essential mission systems** and automatically operates in the event of a commercial grid outage. In addition, **each installation** has standby generators in storage for repositioning as required. Facility power production specialists ensure that the generators are **primed and ready to work**, and that they are maintained and fueled during an emergency. With careful maintenance these generators can **bridge the gap for even a lengthy outage**. As further back up to this installed equipment, DoD maintains a strategic stockpile of electrical power generators and support equipment that is kept in operational readiness. For example, during Hurricane Katrina, the Air Force transported more than 2 megawatts of specialized diesel generators from Florida, where they were stored, to Keesler Air Force Base in Mississippi, to support base recovery.

#### Grid is resilient and sustainable.

Clark, MA Candidate – Intelligence Studies @ the American Military University, ‘12

[Paul, senior analyst – Chenega Federal Systems, 4/28/’12, , “The Risk of Disruption or Destruction of Critical U.S. Infrastructure by an Offensive Cyber Attack,” American Military University]

In 2003, a simple physical breakdown occurred – trees shorted a power line and caused a fault – that had a cascading effect and caused a power blackout across the Northeast (Lewis 2010). This singular occurrence has been used as evidence that the electrical grid is fragile and subject to severe disruption through cyber-attack, a disruption that could cost billions of dollars, brings business to a halt, and could even endanger lives – if compounded by other catastrophic events (Brennan 2012). A power disruption the size of the 2003 blackout, the worst in American¶ history at that time (Minkel 2008), is a worst case scenario and used as an example of the¶ fragility of the U.S. energy grid. This perceived fragility is not real when viewed in the context¶ of the robustness of the electrical grid.¶ When asked about cyber-attacks against the electrical grid in April of 2012, the¶ intelligence chief of U.S. Cyber Command Rear Admiral Samuel Cox stated that an attack was¶ unlikely to succeed because of the “huge amounts of resiliency built into the [electrical] system¶ that makes that kind of catastrophic thing very difficult” (Capaccio 2012). This optimistic view¶ is supported by an electrical grid that has proven to be robust in the face of large natural¶ catastrophes. Complex systems like the electrical grid in the U.S. are prone to failures and the¶ U.S. grid fails frequently. Despite efforts to reduce the risk out power outages, the risk is always¶ present. Power outages that affect more than 50,000 people have occurred steadily over the last¶ 20 years at a rate of 12% annually and the frequency of large catastrophes remains relatively¶ high and outages the size of the 2003 blackout are predicted to occur every 25 years (Minkel¶ 2008). In a complex system that is always at risk of disruption, the effect is mitigated by policies¶ and procedures that are meant to restore services as quickly as possible. The most visible of these policies is the interstate Emergency Management Assistance Compact, a legally binding¶ agreement allowing combined resources to be quickly deployed in response to a catastrophic¶ disaster such as power outages following a severe hurricane (Kapucu, Augustin and Garayev¶ 2009).¶ The electrical grid suffers service interruptions regularly, it is a large and complex system¶ supporting the largest economy in the world, and yet commerce does not collapse (Lewis 2010).¶ Despite blizzards, earthquakes, fires, and hurricanes that cause blackouts, the economy is¶ affected but does not collapse and even after massive damage like that caused by Hurricane¶ Katrina, national security is not affected because U.S. military capability is not degraded (Lewis¶ 2010).¶ Cyber-security is an ever-increasing concern in an increasingly electronic and¶ interconnected world. Cyber-security is a high priority “economic and national security¶ challenge” (National Security Council n.d.) because cyber-attacks are expected to become the¶ top national security threat (Robert S. Mueller 2012). In response to the threat Congress is¶ crafting legislation to enhance cyber-security (Brito and Watkins 2012) and the Department of¶ Homeland Security budget for cyber-security has been significantly increased (U.S. Senate¶ Committee on Homeland Security and Governmental Affairs 2012).

#### No risk of fuel shortage without renewable.

Bartis and Bibber, ‘11

[James and Lawrence, senior policy researchers at the RAND Corporation, "Alternative Fuels for Military Applications," http://www.rand.org/content/dam/rand/pubs/monographs/2011/RAND\_MG969.pdf]

Defense Department goals for alternative fuels in tactical weapon systems should be based on potential national benefits, since the use of alternative, rather than petroleum-derived, fuels offers no direct military benefits. While Fischer-Tropsch fuels and hydrotreated renewable fuels are no less able than conventional fuels to meet the Defense Department’s needs, they offer no particular military benefit over their petroleum-derived counterparts. For example, even if alternative fuels can be produced at costs below the prevailing costs for conventional fuels, they will be priced at market rates. Also, we are unable to find any credible evidence that sources to produce jet or naval distillate fuel will run out in the foreseeable future. If conflict or a natural disaster were to abruptly disrupt global oil supplies, the U.S. military would not suffer a physical shortage. Rather, the resulting sharp increase in world prices would cause consumers around the world to curb use of petroleum products. Less usage would ensure that supplies remained available. As long as the military is willing to pay higher prices, it is unlikely to have a problem getting the fuel it requires. If problems do arise, the Defense Production Act of 1950 (P.L. 81-774) contains provisions for performance on a priority basis of contracts for the production, refining, and delivery of petroleum products to the Defense Department and its contractors.

#### Data disproves hegemony impacts.

Fettweis, Department of Political Science at Tulane University, ‘11

[Christopher, 9/26/11, Free Riding or Restraint? Examining European Grand Strategy, Comparative Strategy, 30:316–332, EBSCO]

It is perhaps worth noting that there is no evidence to support a direct relationship between the relative level of U.S. activism and international stability. In fact, the limited data we do have suggest the opposite may be true. During the 1990s, the United States cut back on its defense spending fairly substantially. By 1998, the United States was spending $100 billion less on defense in real terms than it had in 1990. 51 To internationalists, defense hawks and believers in hegemonic stability, this irresponsible “peace dividend” endangered both national and global security. “No serious analyst of American military capabilities,” argued Kristol and Kagan, “doubts that the defense budget has been cut much too far to meet America’s responsibilities to itself and to world peace.” 52 On the other hand, if the paciﬁc trends were not based upon U.S. hegemony but a strengthening norm against interstate war, one would not have expected an increase in global instability and violence. The verdict from the past two decades is fairly plain: The world grew more peaceful while the United States cut its forces. No state seemed to believe that its security was endangered by a less-capable United States military, or at least none took any action that would suggest such a belief. No militaries were enhanced to address power vacuums, no security dilemmas drove insecurity or arms races, and no regional balancing occurred once the stabilizing presence of the U.S. military was diminished. The rest of the world acted as if the threat of international war was not a pressing concern, despite the reduction in U.S. capabilities. Most of all, the United States and its allies were no less safe. The incidence and magnitude of global conﬂict declined while the United States cut its military spending under President Clinton, and kept declining as the Bush ramped the spending back up. No complex statistical analysis should be necessary to reach the conclusion that the two are unrelated. Military spending ﬁgures by themselves are insufﬁcient to disprove a connection between overall U.S. actions and international stability. Once again, one could presumably argue that spending is not the only or even the best indication of hegemony, and that it is instead U.S. foreign political and security commitments that maintain stability. Since neither was signiﬁcantly altered during this period, instability should not have been expected. Alternately, advocates of hegemonic stability could believe that relative rather than absolute spending is decisive in bringing peace. Although the United States cut back on its spending during the 1990s, its relative advantage never wavered. However, even if it is true that either U.S. commitments or relative spending account for global paciﬁc trends, then at the very least stability can evidently be maintained at drastically lower levels of both. In other words, even if one can be allowed to argue in the alternative for a moment and suppose that there is in fact a level of engagement below which the United States cannot drop without increasing international disorder, a rational grand strategist would still recommend cutting back on engagement and spending until that level is determined. Grand strategic decisions are never ﬁnal; continual adjustments can and must be made as time goes on. Basic logic suggests that the United States ought to spend the minimum amount of its blood and treasure while seeking the maximum return on its investment. And if the current era of stability is as stable as many believe it to be, no increase in conﬂict would ever occur irrespective of U.S. spending, which would save untold trillions for an increasingly debt-ridden nation. It is also perhaps worth noting that if opposite trends had unfolded, if other states had reacted to news of cuts in U.S. defense spending with more aggressive or insecure behavior, then internationalists would surely argue that their expectations had been fulﬁlled. If increases in conﬂict would have been interpreted as proof of the wisdom of internationalist strategies, then logical consistency demands that the lack thereof should at least pose a problem. As it stands, the only evidence we have regarding the likely systemic reaction to a more restrained United States suggests that the current peaceful trends are unrelated to U.S. military spending. Evidently the rest of the world can operate quite effectively without the presence of a global policeman. Those who think otherwise base their view on faith alone.

#### No lashout – probability of miscalc is zero.

Quinlan, Consulting Senior Fellow for South Asia International Institute for Strategic Studies, ‘9

[Michael, 2009, “Thinking About Nuclear Weapons,” Amazon]

Similar considerations apply to the hypothesis of nuclear war being mistakenly triggered by false alarm. Critics again point to the fact, as it is understood, of numerous occasions when initial steps in alert sequences for US nuclear forces were embarked upon, or at least called for, by indicators mistaken or misconstrued. In none of these Instances, it Is accepted, did matters get at all near to nuclear launch—extraordinary good fortune again. critics have suggested. But the rival and more logical inference from hundreds of events stretching over sixty years of experience presents Itself once more: that the probability of initial misinterpretation leading far towards mistaken launch is remote. Precisely because any nuclear-weapon possessor recognizes the vast gravity of any launch, release sequences have many steps, and human decision is repeatedly interposed as well as capping the sequences. To convey that because a first step was prompted the world somehow came close to accidental nuclear war is wild hyperbole, rather like asserting, when a tennis champion has lost his opening service game, that he was nearly beaten in straight sets. History anyway scarcely offers any ready example of major war started by accident even before the nuclear revolution imposed an order-of-magn itude increaw In caution. It was occasionally conjectured that nuclear war might be triggered by the real but accidental or unauthorized launch of a strategic nuclear-weapon delivery system in the direction of a potennal adversay)’. No such launch is known to have occurred In over sixty years. The probability of it is thcrcfore very low. But even if it did happen, the further hypothesis of its initiating a general nuclear exchange is far-fetched. It fails to consider the real situation of decision-makers, as pages 6—4 have brought out. The notion that cosmic holocaust might be mistakenly precipitated In this way belongs to science fiction. one special form of miscalculation appeared sporadically in the speculations of academic commentators, though it was scarcely ever to be encountered—at least so far as my own observation went—in the utterances of practical planners within government. This is the idea that nuclear war might be erroneously triggered, or erroneously widened, through a state under attack misreading either what sort of attack it was lwing subjected to, or where the attack came from. One special form of miscalculation appeared sporadically in the speculations of academic commentators, though it was scarcely ever to be encountered—at least so far as my own observation went—in the utterances of practical planners within government. This is the idea that nuclear war might be erroneously triggered, or erroneously widened, through a state under attack misreading either what sort of attack It was being subjected to, or where the attack came from. The postulated misreading of the nature of the attack referred in particular to the hypothesis that if a delivery system—normally a missile—that was known to he capable of carrying either a nuclear or a conventional warhead was launched in a conventional role, the target country might, on detecting the launch through its early. warning systems, misconstrue the mission as an imminent nuclear strike and immediately unleash a nuclear counter-strike of its own. This conecture was voiced, for example, as a criticism of the pro- lls (or giving the US Trident SL11M long associated with nuclear missions, a capability to deliver conventional warheads. Whatever the nwrit of those proposals (it Is not explored here), It is hard to regard this particular apprehension as having any real-life credibility. The flight time of a ballistic missile would not exceed about thirty minutes, and that of a cruise missile a few hours, before arrival on target made its character—conventional or nuclear—unmistakable. No government will need, and no non- lunatic government could wish, to take within so short a span of time a step as enormous and irrevocable as the execution of a nuclear strike on the basis of early-warning Information alone without knowing the true nature of the incoming attack. The speculation tends moreover to be expressed without reference either to any realistic political or conflict-related context thought to render the episode plausible, or to the manifest interest of the launching country, should there be any risk of doubt, in ensuring—by explicit communication if necessary—that there was no misinterpretation of its conventionally armed launch. It may he oblected to this analysis that in the cold war the two opposing superpowers had concepts of launch-on-warning. That seems to be true, at least in the sense that successive US administrations declined to rule out such an option and indeed included In their contingency plans Lxth this and the possibility of launch- under-attack (that is launch after some strikes had been suffered and while the sequence of them was evidently continuing). The Soviet Union was not likely to have had more relaxed practices. But the colossal gravity of activating any such arrangements must always have been recognized. It could have been contemplated only in circumstances where the entire political context made a pre-emptive attack by the adversary plainly a serious and imminent possibility. and where niowover the available information unmistakably mdi- cated that a massive assault with hundreds or thousands of missiles was on the way. That was a scenario wholly unlike that implicit in the supposition that a conventional missile attack might he briefly mIstaken for a nuclear one. The other sort of misunderstanding conjectured—that of misread- ing the source of attack—envisaged. typically. that SLBMs launched by France or the United Kingdom might erroneously be supposed to be coming from US submarines, and so might initiate a super- power exchange which the United States did not in fact intend. (An occasional variant on this was the notion that ‘triggering in this way might actually be an element in deliberate French or IlK deterrent concepts. There was never any truth in this guess in relation to the United Kingdom, and French thinking Is unlikely to have been different.) The unreality In this category of conlecture lay In the Implication that such a scenario could develop without the US government making the most determined efforts to ensure that Soviet (or now Rus.sian leaders knew that the United States was not responsible for the attack, and with those leaders for their part resorting, on unproven suspicion. to action that was virtually certain to provoke nuclear counter-action from the United States. There used occasion- ally to be another speculation, that if the Soviet Union suffered heavy nuclear strikes known to come from France or the United Kingdom, it might judge its interests to be best wrvcd by ensuring that the United States did not remain an unscathed bystander. But even if that were somehow thought marginally less implausible, it would have been a different matter from misinterpretauon of the initial strike. As was nOted earlier In this chapter, the arrangements under which nudear-weapon inventories arc now managed rc in several iniportant respects already mudi less open to concern than they were during much of the cold war. Worries voiced more recently sometimes relate to ‘cyher-attack’----hostile Interference, whether by states or by other actors such as terrorists, with Information systems used in the control of armouries. It is highly unlikely, though details are (again understandably) not made public, that regular reviews of control arrangements are oblivious to any such risks. Perceptions of them do however reinforce the already-strong case that whatever arrange. ments still remain in place for continuous high readiness to launch nuclear action at short notice should be abandoned. Chapter 13 returns to this.

#### Conventional forces and heg don’t matter – even with cuts, missile and nuclear defense efficiency maintains relative primacy and prevents escalating conflict

Leiber & Press 6 (Keir A. & Dary, International Security, Volume 30, Number 4, Spring 2006, pp. 7-44, “The End of MAD? The Nuclear Dimension of U.S. Primacy”)

The Russian and Chinese Nuclear Arsenals: Erosion and Stasis¶ The erosion of Russia's nuclear capabilities is likely to continue, thereby reducing the counterforce requirements for a U.S. first strike. Officials previously announced plans to reduce Russia's arsenal to 1,500 warheads by 2012, but actual reductions will likely be steeper. More than 80 percent of Russia's silo-based ICBMs have exceeded their original service lives; failed tests and low rates of production have stymied plans to replace them with new missiles. Similarly, Russia intends to keep retiring its aging mobile ICBMs and replacing them with new mobile missiles, but production of the new missiles continues to fall further behind schedule. The fast pace of missile retirements and slow pace of production could leave Russia with as few as 150 land-based missiles by the year 2010, down from nearly 550 today and almost 1,300 missiles in 1990.46¶ Russia's ballistic missile submarine force faces a similar fate. Six SSBNs are expected to be retired in the next few years; they are scheduled to be replaced by 5 submarines: 4 existing boats that are currently being overhauled and one new SSBN.47 Therefore, even if Russia's plans for its fleet are realized, the submarine force will initially shrink from 9 submarines to 8. But Russia's planned submarine deployments are unlikely to occur on schedule. Work on the submarines [End Page 26] in overhaul has repeatedly been delayed, and the new Russian SSBN will remain unarmed until the new missile it is designed to carry becomes available; however, although the missile was recently flight-tested, its production schedule has slipped to 2008 at the earliest.48 Even worse from the perspective of stable deterrence, tight budgets and deteriorating performance continue to curtail the frequency of Russian submarine patrols.49¶ China's ability to redress the nuclear imbalance is even more suspect. Much has been made of China's ongoing defense modernization, but the country's strategic arsenal is growing at a glacial pace. China has only 18 ICBMs, a number that has remained essentially unchanged for more than a decade. In addition, these missiles are kept unfueled, and their warheads are stored separately. U.S. intelligence predicts that China will eventually deploy a new generation of ICBMs—modern mobile missiles—and field as many as 100 by 2020. This is certainly possible, but analysts have been expecting this deployment since the mid-1980s. According to unclassified reports, U.S. intelligence analyses repeatedly forecast the imminent deployment of advanced Chinese mobile ICBMs because they based their estimates on calculations of what China could conceivably do, rather than on concrete evidence of missile production.50 Beyond its small ICBM force, China deployed 1 SSBN in 1983, but it had such poor capabilities that it never left Chinese waters and is no longer operational. China is designing a new class of SSBNs, but progress has been slow; even the U.S. Defense Department estimates that operational deployment is many years away.51¶ The U.S. Nuclear Force: Missile Defense and New Initiatives¶ While the Russian force erodes and the Chinese arsenal barely improves, the United States is significantly enhancing its strategic nuclear capabilities. The 2001 Nuclear Posture Review issued by George W. Bush's administration reaffirms the importance of nuclear weapons in U.S. national security strategy and endorses a set of programs that will greatly increase the offensive power of the U.S. nuclear arsenal. [End Page 27]¶ MISSILE DEFENSE. U.S. offensive nuclear capabilities will grow as the United States deploys a national missile defense (NMD) system. In 2001 the United States withdrew from the Antiballistic Missile Treaty and began to build a missile shield. The first contingent of NMD interceptors was deployed in 2004, but this step is only the starting point for a large, multilayered missile defense system. To this end, the United States has doubled investment in missile defense and accelerated research and development on a range of land-, air-, sea-, and space-based missile defense systems.52¶ Opponents of national missile defense raise two important critiques regarding its feasibility. First, they note that even a few hundred incoming warheads would overwhelm any plausible defense. Second, a missile defense system based on intercepting warheads outside the Earth's atmosphere is impractical because it is extremely difficult to differentiate decoys from warheads in space.53 Although both criticisms are cogent, even a limited missile shield could be a powerful complement to the offensive capabilities of U.S. nuclear forces. Russia has approximately 3,500 strategic nuclear warheads today, but if the United States struck before Russian forces were alerted, Russia would be lucky if a half-dozen warheads survived. A functioning missile defense system could conceivably destroy six warheads. Furthermore, the problem of differentiating warheads from decoys becomes less important if only a handful of surviving enemy warheads and decoys are left to intercept. Facing a small number of incoming warheads and decoys, U.S. interceptors could simply target them all.¶ OFFENSIVE STRIKE SYSTEMS. The United States plans to reduce the size of its nuclear force over the next decade, but it will increase the counterforce capabilities of that arsenal. Although efforts to build new low-yield warheads and earth-penetrating weapons have attracted more attention, a significant leap in U.S. nuclear capability will result from planned improvements to the United States' SLBM and ICBM arsenal. Navy officials are exploring ways to significantly improve the accuracy of some of its highly accurate Trident II SLBMs [End Page 28] by making the reentry vehicles maneuverable and giving them Global Positioning Satellite receivers. They expect that missile accuracy could improve from the current figure of 90 meters to 12 meters or less.54 In addition, the navy plans to replace the fuse for the warheads on almost half of these missiles to allow them to detonate at ground level; currently they can only be set for an airburst, which is not ideal for attacking very hard targets. The combined effect of these improvements—substantially increased accuracy and a ground-burst fuse—will greatly increase the lethality of the U.S. submarine force against very hard targets such as missile silos.55 The United States is also planning to upgrade its ICBM force. It will take reentry vehicles and warheads from retired MX missiles and use them to upgrade approximately 200 Minuteman ICBMs. The upgrade will improve the ICBM's accuracy and nearly double its warhead yield.¶ The United States is also improving a slew of nonnuclear capabilities that will increase its ability to destroy an enemy's nuclear arsenal. For example, the United States continues to work on locating very quiet SSBNs, reportedly continuing to send attack submarines into Russian waters to try to track Russian submarines.56 Other initiatives seek to improve the U.S. ability to find mobile missile launchers and to deploy ground- and space-based systems that could destroy or disable enemy satellites.57 The former capability appears aimed at a future in which an adversary has a dispersed mobile ICBM force (as China is allegedly building); antisatellite weapons would be useful if future adversaries develop reliable satellite early-warning systems to detect an incoming nuclear attack.

### Space Radar

#### U.S. control of space guts hegemony and leads to nuclear war.

DeBlois, ‘3

[Bruce, Council on Foreign Relations, “The Advent of Space Weapons,” ASTROPOLITICS v. 1 n. 1, Spring 2003, p. 43-45, pp. 29-53.]

The migration of weapons to space is likely to create more military problems for the host country than it will solve. From a military perspective, the price of localized and global instability coupled with incentives for pre-emption and escalation may well be a weakened military posture. Global instability is the core issue in an international context. One country’s pursuit and deployment of space weapons is destabilizing from the perspective of both foe and friend. Weaponization could prompt adversaries to develop ASAT or space-based weapons. In the extreme case, a peer competitor might engage in an escalatory arms race. Probably a greater threat, however, is dispersed, low-level proliferation. A number of countries are capable of building limited ASAT or rudimentary space weapons, and might choose to do so. The wide proliferation of micro-satellites or other ASAT weapons would threaten all space assets, due to the varying (and perhaps unpredictable) motivations of countries that could obtain them. Those countries capable of posturing space weapons are generally those that have the most assets to lose in a space war. The acquisition of such weapons might well present an irresistible first-strike opportunity for a country unlikely to win in a conventional conflict. Other adversarial states, especially those incapable of building space weapons or achieving parity in conventional forces, might increase their efforts to acquire nuclear, biological or chemical weapons, or pursue other asymmetric activities (e.g. terrorism). Beyond adversarial responses, allies and partners abroad might also react unfavorably. Any unilateral decision to weaponize space might have negative consequences for diplomatic relationships worldwide. The European Union has been a consistent and vocal critic and, as validated by multiple resolutions in the UN regarding the prevention of an arms race in outer space (PAROS), reflects the opinions of the larger international community. In response to proposed US tests of its mid-infrared advanced chemical laser (MIRACL), an official from the European Space Agency commented: ‘The world space community is confused as to the need for the US to develop space weaponry now, and is dismayed that the US is planning to test a high-powered laser against a satellite target’ 31 Although it is unlikely that weapons in space would threaten or sever strong existing diplomatic ties, simple unpopularity might prompt a shift in the international center of gravity. Countries opposing or alienated by one states’ space policy might gravitate to other alignments, possibly creating an international coalition to oppose the space-weaponizing country on these and other issues within international organizations such as the UN or the World Trade Organization (WTO). A decision to posture weapons in space might also diminish the ability of the space-weaponizing country to assemble international coalitions. In the case of the United States, such international political clout has been crucially [44] important to the military, political, judicial and economic conduct of the war on terrorism. These forms of diplomatic influence might be more important than hard power in the maintenance of global stability in the twenty-first century. 32 The simple unilateral posturing of space weapons creates global instability in the form of encouraging adversaries to respond symmetrically or asymmetrically, heightening tensions, while at the same time crippling alliances. In this less stable global environment, there is also the prospect of space weapons causing less stable regional environments. Integrating space weapons into military operations could have unexpected consequences for the progression of conflict situations, prompting significant regional instability. In most war games that include space assets, commanders discover that preemptively destroying or denying an opponent’s space-based assets with space weapons is appealing, yet often leads to rapid escalation into full-scale war, even triggering nuclear weapons use. One commander commented: ‘[If] I don’t know what’s going on, I have no choice but to hit everything, using everything I have’. 33 That this conclusion surprised strategists suggests that the full implications of space weapons have not yet been fully explored. What is common knowledge, derived from years of experience in futuristic war games, is that permanently based space weapons invite pre- emption and escalation. Local to a specific situation of heightened tensions, the existence of space weapons on one side, the other, or both could be the determining catalyst for escalatory war. In this view, a space-weaponizing country creates both the powder keg of global instability (where it has weakened its own international posture) as well as the spark of regional instability (where it has made itself a target of pre- emption and escalation). Coupled with this very unstable environment, it can also be argued that the same country that weaponizes space may actually damage its own military power. Much of the impetus behind space weaponization stems from perceived military utility, to include national missile defense applications for boost-phase intercept, time-critical targeting, and defense mechanisms for critical space systems. Ironically, the posturing of more military assets in space could actually weaken the military posture of those that seek further military advantage in that domain. Space assets are already a center of gravity (CoG), or at least a critical concentration of military force enhancement assets. To deploy more systems in space in an attempt to protect this CoG only complicates the problem. In spite of the added defenses, the preponderance of threats will remain: denial and deception, electronic warfare (e.g. uplink and downlink jamming), ground facilities disruption, micro-satellites (e.g. space mines), direct ascent interceptors or even a nuclear detonation in space. 34 In addition to limited utility to defeat these threats, the new space-based weapon systems would also be vulnerable to those same threats. There are more logical alternatives, many of which de-emphasize reliance on centralized space assets (e.g. alternatives offering redundancy in space or with terrestrial systems). In a briefing to the George Washington University’s Space Policy Institute Workshop, Dr Karl Mueller of RAND summarized a comprehensive set of responses to foreign space threats that do not require space-based weapons (Figure 4). [45] In short, for the countries that could weaponize space, doing so would only amplify an extant and vulnerable CoG, and they would do so in the midst of many better and less costly alternatives. Perhaps more significant than extending the space CoG (i.e. making it more vulnerable) is exposing it (i.e. revealing it). A move toward space weapons is likely to prompt competitors to build ASAT systems, systems that will also threaten robust communications intelligence gathering systems that, to date, have been protected by an open-skies environment. Additionally, it could be strongly argued that the countries currently able to posture space weapons are those that currently hold military advantages in many other realms, and this begs the question: why would powers that currently hold military advantage in the air, land and sea realms open a new realm in space that could conceivably level the playing field for others?

#### Plan causes trades off with terrestrial military capability.

Krepon, arms control expert and President Emeritus of the Stimson Center, ‘3

[Michael and Christopher Clary, SPACE ASSURANCE OR SPACE DOMINANCE: THE CASE AGAINST WEAPONIZING SPACE, 2003, Henry L. Stimson Center, p. 107.]

The argument presented here is that terrestrial U.S. military dominance would be impaired, rather than enhanced, by American initiatives to weaponize space. While the United States clearly has the ability to outspend competitors, and to produce more advanced types of space weaponry, weaker adversaries will have affordable, asymmetric means to counter U.S. initiatives in space, as well as on earth. The net result of an uneven competition to weaponize space would be that prudent U.S. defense planners could not count on protecting space assets, and that weaker adversaries could not count on the negation of U.S. advantages. Neither could be certain of the outcome of space warfare, but both adversaries would have to fear the worst. Because of the vulnerability of space assets to ASATs, both would need to assume a dangerous “hair-trigger” posture in space—unless the United States employed preemptive military means to prevent the launch or deployment of presumably hostile space assets belonging to other states.

#### No space radar - political opposition, technical challenges, high launch costs, and other countervailing pressures.

Hitchens, President of the Center for Defense Information, ‘8

[Theresa, “Space Wars - Coming to the Sky Near You?”, Scientific American, February, http://www.sciam.com/article.cfm?id=space-wars-coming-to-the-sky-near-you]

Obstacles to Space Weapons What, then, is holding the U.S. (and other nations) back from a full-bore pursuit of space weapons? The countervailing pressures are threefold: political opposition, technological challenges and high costs. The American body politic is deeply divided over the wisdom of making space warfare a part of the national military strategy. The risks are manifold. I remarked earlier on the general instabilities of an arms race, but there is a further issue of stability among the nuclear powers. Early-warning and spy satellites have traditionally played a crucial role in reducing fears of a surprise nuclear attack. But if antisatellite weapons disabled those eyes-in-the-sky, the resulting uncertainty and distrust could rapidly lead to catastrophe. One of the most serious technological challenges posed by space weapons is the proliferation of space debris, to which I alluded earlier. According to investigators at the air force, NASA and Celestrak (an independent space-monitoring Web site), the Chinese antisatellite test left more than 2,000 pieces of junk, baseball-size and larger, orbiting the globe in a cloud that lies between about 200 kilometers (125 miles) and 4,000 kilometers (2,500 miles) above Earth’s surface. Perhaps another 150,000 objects that are a centimeter (half an inch) across and larger were released. High orbital velocities make even tiny pieces of space junk dangerous to spacecraft of all kinds. And ground stations cannot reliably monitor or track objects smaller than about five centimeters (two inches) across in low Earth orbit (around a meter in geostationary orbit), a capability that might enable satellites to maneuver out of the way. To avoid being damaged by the Chinese space debris, in fact, two U.S. satellites had to alter course. Any shooting war in space would raise the specter of a polluted space environment no longer navigable by Earth-orbiting satellites. Basing weapons in orbit also pre­sents difficult technical obstacles. They would be just as vulnerable as satellites are to all kinds of outside agents: space debris, projectiles, electromagnetic signals, even natural micrometeoroids. Shielding space weapons against such threats would also be impractical, mostly because shielding is bulky and adds mass, thereby greatly increasing launch costs. Orbital weapons would be mostly autonomous mechanisms, which would make operational errors and failures likely. The paths of objects in orbit are relatively easy to predict, which would make hiding large weapons problematic. And because satellites in low Earth orbit are overhead for only a few minutes at a time, keeping one of them constantly in range would require many weapons. Finally, getting into space and operating there is extremely expensive: between $2,000 and $10,000 a pound to reach low Earth orbit and between $15,000 and $20,000 a pound for geostationary orbit. Each space-based weapon would require replacement every seven to 15 years, and in-orbit repairs would not be cheap, either.

#### No China war – consensus of experts.

Fettweis, Professor Political Science at Tulane, ‘10

[Christopher, “Dangerous Times?: The International Politics of Great Power Peace”, Washington, DC, USA: Georgetown University Press, p 128,

<http://site.ebrary.com/lib/asulib/Doc?id=10439493&ppg=128>, RSR]

The diminution of military influence on policymaking is indicative of a broader generational change that seems to be occurring inside Beijing. A number of China experts have begun to argue that the current leadership of the PRC has little in common with the founding members of the communist party, and are far less dogmatic in their approach to both economics and politics. 34 While it is surely a bit premature to suggest that there is a Chinese Gorbachev ready to bring political freedom to his people, at the very least Beijing has altered the way it treats its neighbors. China’s muchdiscussed “charm offensive” has won it many friends in East Asia, and it has helped solidify many of the complex economic ties that cement stability across the region and avoid the regional tensions that realists have expected to see in response to its rapid economic growth. 35 Beijing has been reluctant to use its military superiority to threaten or bully its neighbors into cooperation. Perhaps it is on its way to internalizing the norm of peaceful conflict resolution and will soon no longer contemplate the use of force to achieve its goals; for now, perhaps, the determination to be a good neighbor is the best step for which anyone can hope.

#### No impact to Pakistani loose nukes – they’re separated.

Koring, ‘9

[Paul, Globe and Mail, “Pakistan’s nuclear arsenal safe, security experts say”, 10-16-9

http://www.theglobeandmail.com/news/world/pakistans-nuclear-arsenal-safe-security-experts-say/article1325820/

Pakistan's nuclear-weapons security is modeled on long-standing safeguards developed by the major powers and includes separately storing the physical components needed for a nuclear warhead and keeping them apart and heavily guarded. "Even if insurgents managed to get a fully assembled weapon, they would lack the 'secret decoder ring' [the special security codes] needed to arm it," Mr. Pike said. Thought to possess a relatively modest nuclear arsenal of between 70 and 100 warheads, Pakistan is even more secretive about its security measures than most nuclear-weapons states. But even if those measures were somehow breached, Mr. Pike said, even a complete nuclear weapon would be a limited threat in the hands of terrorists. "If they did try to hot-wire it to explode in the absence of knowing the approved firing sequences, it would probably only trigger the high-explosives, making a jim-dandy of a dirty bomb," he said, referring to an explosion that spreads radioactive material over a small area, but is not a nuclear blast.

#### Large-scale bioterror is impossible—multiple warrants and cites experts

Krauss 12 (Lawrence, Foundation Professor and Director of the Arizona State University Origins Project, “Countdown to the Man-Made Apocalypse,” 3/16/2012, <http://www.slate.com/articles/health_and_science/future_tense/2012/03/the_doomsday_clock_from_the_bulletin_of_atomic_scientists_tackles_biotechnology_.html>, NP)

We should encourage the vigilance and rigorous discussion that has accompanied these developments. Happily, however, the bulletin’s experts, including Harvard biologist Matthew Meselson and human genome pioneer and synthetic biologist Craig Venter, suggest the above scenarios are in the near term unlikely at best, pure fiction at worst. In the first place, the synthetic-biology industry is well-aware of the dangers of unmonitored genetic hacking and is responding on its own. Appeased by the group’s self-policing thus far, the Presidential Commission for the Study of Bioethical Issues determined in 2010 that “there is no reason to endorse additional federal regulations or a moratorium on work in this field at this time.” In the second place, while manufacturing dangerous biological compounds may be possible, weaponizing them is not so easy. While it might be possible to inflict significant terror locally, dispersing biological agents over broad regions to create global crises is far more challenging. Next, there is the difficulty of reproducing appropriate technology. The field is as much an art as a science, and it is difficult to reliably reproduce results in a field where the financial benefits are likely to be so great that proprietary technology is not readily shared. We can all (at least those of us who, unlike some of the dominant presidential candidates, accept the reality of both evolution and an old earth) take solace in the robustness of life itself, evolved over 4.5 billion years in the presence of remarkably ingenious viruses, which have also competed for survival. It is unlikely that a new organism, without the benefit of all of this “learned experience,” could outmaneuver all the mechanisms that life has developed to outwit constant biological invaders. All of this suggested to those of us who have the unenviable task of regularly revisiting the possibility of Doomsday in order to help humanity adjust its thinking appropriately, that the current revolution in biotechnology is, for the moment, more likely to benefit humankind than destroy it.

#### **No impact to space debris – best ev goes neg..**

Institution of Mechanical Engineers 7 (Proceedings of the Institution of Mechanical Engineers -- Part G -- Journal of Aerospace Engineering (Professional Engineering Publishing), *The predicted growth of the low-Earth orbit space debris environment - an assessment of future risk for spacecraft*, December 2007, EBSCO - Vol. 221 Issue 6, pages 975-985, SP)

The current work was performed with the NASA longterm debris environment model, LEGEND, adapted for the prediction of collisions among objects larger than 1 cm. The 2001 NASA standard breakup model deposited the fragments of the calculated explosions and collisions. NaK (sodium potassium) droplets were generatedby theNASANaKmodel, newly corrected for a factor of two over-estimation of the droplet population. SRM slag and surface degradation particulates (ejecta and paint flakes) were excluded in the current work. NASA, at present, has no verified models of either. The only known source of 1-cm objects would be the SRM slag, which would then likely increase the collision rates determined here. Also excluded were any vehicles orMRDassociated with crewed missions. The current work was intended as a general study of collision risks in the high traffic regions of LEO. The current study models collisional events among objects in LEO larger than 1 cm throughout the years 1957–2035. The activity is most prevalent in regions of high traffic in LEO, the altitude bands 600–1000km and 1400–1500 km. The risk to LEO spacecraft in the near future is a continuation of that which has been occurring throughout the past. The overall effect is an increasing collision rate to a handful of events per year by the end of 2035, this assuming only standardmitigation techniques are applied throughout the period (e.g. moderately successful upper stage safing and MRD suppression as in the last decade). Non-catastrophic collisions between small impactors (<10 cm) and large targets (10 cm) are by far the dominant mode of collisions in the modelled environment. In reality, these events would be unlikely to be observed, as the effect is a destruction of an untracked impactor and some crater damage to a much larger target.

## 2NC: Water Add on

#### Higher price in desal now will cause shift to conservation

Boals 9

[Connor Boals Infographics by Hannah Nester Circle of BlueDrinking From The Sea, <http://www.circleofblue.org/waternews/2009/world/drinking-from-the-sea-demand-for-desalination-plants-increases-worldwide/>, June 29]

“The most reliable, most cost effective and most environmentally friendly source of water is conservation, increased efficiency and waste prevention,” Scow said. “We have so many opportunities to save water. Those needs need to be addressed first.” Many in the industry see a silver lining in the higher pricing of desalinated water: people will be thriftier and use less. “Yes, the price is obscenely high, but what’s the alternative if you don’t have any water?” Pankratz said. “Until we look at water differently and start valuing it for what its real cost is, we won’t have a good picture, and people won’t be conserving water like they should.” Palmer said that the pricing of water in Australia has always been too cheap. “We are the driest continent, and our prices for municipal water are about half of what people charge in Europe, where there is admittedly more water,” he said. “[Desalinated] water is three times more expensive, therefore you don’t want to waste it,” he said. “So water authorities have to charge accordingly, and people will use less water and waste less water.”

#### Conservation alone can solve the world’s water problems

Bouguerra 8

[Environmental and economic challenges of water desalination [Mohamed Larbi BOUGUERRA](http://base.d-p-h.info/fr/corpus_auteur/fiche-auteur-839.html) 02 / 2008 <http://base.d-p-h.info/fr/fiches/dph/fiche-dph-7355.html>, Author’s lecture during the roundtable on « Natural resources and security » during the seminar on « Natural resources » organized on the 18th of January 2008 by the French Embassy in Amman and the Institut Français du Proche-Orient.]

For some analysts, water desalination may appear as a technological fix to the water needs of our modern societies or, sometimes, as a political trick as in the case of the Israeli- Palestinian conflict. Natural resources such as water are of course limited and finite. Desalination is deceiving. It’s a fool paradise rubbing that fact. Illimited abundance in any field or realm is a hoax. Rather, one must take into account of all the techniques aiming at a wise water use, to conserving of the resource and processes intented to save water. One must manage water in order to eliminate leakages which amount up to 20-30% on average worldwide (NAFW not accounted for water). According to recent studies, it appears that conservation measures may meet the new water needs for a cost which is 10 to 25% of incurred expenses of water desalination. In that regard, water efficiency must be improved. Leakages and wastings must be eliminated. According to the Washington based Worldwatch Institute, we can avoid thus desalination and its negative effects on the environment and the atmosphere. Finally one must point to the fact that desalinated water quality must be carefully monitored for bromate, a suspected carcinogen. According to international regulations, bromate levels may not exceed 10 ppb on average over a year in a reservoir.

#### Desal destroys plankton and marine species

Matthews 11

[Richard Matthews is a consultant, eco-entrepreneur, green investor and author of numerous articles on sustainable positioning, enviro-politics and eco-economics. He is the owner of THE [GREEN MARKET](http://en.wikipedia.org/wiki/Green_market), a leading sustainable business blog and one of the Web’s most comprehensive resources on the business of the environment., <http://globalwarmingisreal.com/2011/03/23/are-desalination-technologies-the-answer-to-the-world-water-crisis/>, Are Desalination Technologies the Answer to the World Water Crisis?]

In addition to its high cost, desalination technologies are harmful to the environment. Removing salt from seawater produces brine, which contains twice the salt of seawater; they also contain contaminants that can affect marine life when dumped back to the sea. If brine is disposed on land, it could seep through the soil and pollute water reserves underground. The US [Environmental Protection Agency](http://www.epa.gov/climatechange/endangerment.html) found that desalination plants kill at least 3.4 billion fish and other marine life annually. This represents a $212.5 million loss to commercial fisheries. Desalination plants can also destroy up to 90 percent of plankton and fish eggs in the surrounding water.

#### Plankton key to all life on earth

IBMEC 12

[Island Bay Marine Education Center, <http://www.octopus.org.nz/Plankton.html>, The Marine Education Centre is a not for profit charitable organisation, focussed on conservation through education, promoting the on-going care and sustainable use of Our Ocean, <http://www.octopus.org.nz/Plankton.html>]

WHY SHOULD WE CARE ABOUT PLANKTON? Plankton are the basis of all life in the ocean and food for larger marine animals from shellfish to large fish and even whales. The largest fish in the world, the Whale Shark, is a plankton feeder and "krill", one of the ocean's smallest animals, is dinner for its largest, the blue whale! Studying plankton can tell scientists about water quality and the amount of nutrients in different areas of the oceans, and how many fish there are likely to be in future years. Almost 70% of the oxygen we breathe comes from the oceans and is made by phytoplankton. Without phytoplankton, there would be no life in the oceans or on Earth!! Plankton also absorbs most of the carbon dioxide (CO2) in the atmosphere (caused by cutting down forests and burning fossil fuels) by converting it to oxygen (O2) or by sinking it to the bottom of the sea where it canÕt escape. Land plants are really important too, but the health of the oceans is even more important. Plankton are the most abundant life form on Earth, except for bacteria. In fact, all the plankton in the oceans weigh more than all the dolphins, fish and whales put together! Plankton may be microscopic in size, but they play a giant role in the Earth's ecosystems!! Plankton is very important for all life on this planet. Without it both the ocean and the land would become a desert. Where there's lots of sunlight, phytoplankton grows quickly, mopping up carbon dioxide, releasing oxygen and providing food for zooplankton and the rest of the ocean food web including whales. When plankton die they fall to the bottom of the ocean and break down like compost and help fertilise new plankton growth.. But not all dead plankton breaks down quickly. Some of it gets buried in layers of sand and mud which builds up over time crushing and heating the plankton and causing chemical changes.

#### Nuclear desalination is ineffective.

Smith, Editor Emeritus of Earth Island Journal, a former editor of Common Ground magazine, a Project Censored Award-winning journalist, and co-founder of Environmentalists Against War, ‘11

[Gar, "NUCLEAR ROULETTE: THE CASE AGAINST A NUCLEAR RENAISSANCE," June, International Forum on Globalization series focused on False Solutions,

http://ifg.org/pdf/Nuclear\_Roulette\_book.pdf]

By 2025, 3.5 billion people will face severe fresh-water shortages. Nuclear proponents groping for justifications to expand nuclear power have argued that the waste heat from power plants can provide a “cheap and clean” solution to the inherently costly process of removing salt from seawater. Desalination plants (there are 13,080 worldwide, mostly oil- and gas-fired and mostly in wealthy desert nations) already produce more than 12 billion gallons of drinkable water a day. 153 The first nuclear desalinator was installed in Japan in the late 1970s and scores of reactor-heated desalination plants are operating around the world today.¶ But nuclear desalination is another False Solution. The problem with atomic water-purifiers is that using heat to treat seawater is an obsolete 20 th -century technology. Thermal desalination has given way to new reverse osmosis systems that are less energy intensive and 33 times cheaper to operate. 154 Nuclear desalination advocates claim that wind, solar, and wave power aren’t up to the task while new low-temperature evaporation technology may be able to produce high purity water at temperatures as low as 122° Fahrenheit. 155 Promoting reactors as a solution to the world’s water shortage is especially ludicrous since nuclear power plants consume more water than any other energy source. 156¶ Even proponents admit there is a potential risk that running seawater through a radioactive environment might contaminate the drinking water produced. 157 Undeterred, scientists in Russia and India have proposed anchoring small atom-powered water-plants offshore near densely populated coastal cities. But this would provide no relief for the billions of people living inland in water-starved regions of North Africa and Asia.¶ Desalination is merely a way of giving a marginal new purpose to existing reactors whose balance sheets would be improved if they were retrofitted with desalination chambers. As with power generation, so with desalination: efficiency in water use (better irrigation technology, crop selection, eliminating transit losses, etc.) beats new production.¶ A real solution to the growing global water shortage needs to address the increasing amount of water diverted to wasteful agricultural and industrial practices and concentrate on preventing the water from being contaminated in the first place—by, among other things, capping the size of local populations to match locally available water supplies.

## 2NC Case

#### US attempt at space dominance will create more military problems than it can solve. Adversaries will develop ASATS that would threaten weapons in space and terrestrially. Countries will realign against the United States destroying unipolarity and causing the preemptive strike against space weapons which causes full-scale nuclear weapon use in space, leading to extinction. That’s 1NC **DeBlois.**

#### Perceived US weapons cause other nations to attempt military modernization – this undercuts the ability of US forces to operate effectively on the ground – that outweighs their solvency mechanism.

Kagan, Resident Scholar at the American Enterprise Institute, ‘6

[Frederick, Jul/August 2006, Foreign Affairs, 85.4, EbscoHost]

Ground forces perform a wide variety of tasks. It is the ability to control territory and populations, however, that is land power's unique contribution to war in this high-tech age. Only soldiers are discriminating enough, in terms of both judgment and the capabilities of their weapons, to mix with an enemy's population, identify the combatants intermingled with that population, and accomplish the critical tasks of governance and reorganization that are so essential in persuading an enemy government to surrender. These are not functions that can be usurped by airpower, by computerization, or by mechanization in any way--at least not until robots with real cognitive abilities can be fielded. In the meantime, military occupation and population control will remain human endeavors and will be less amenable to technological enhancement than any other aspect of war. The idea that technological improvements in the U.S. ground forces, such as the army's Future Combat Systems, will be able to reduce dramatically the number of soldiers necessary for missions similar to those in Iraq or Afghanistan is therefore illusory and unrealistic. As long as war remains a process of human beings interacting with one another--as all irregular warfare is--the land-power "market" will require a heavy investment in people. Airpower and long-range land-based firepower have been helpful in killing insurgents quickly and with minimal collateral damage, but they have played an entirely supporting role. The speed with which Iraqi soldiers can be trained; the number of villages in which the coalition can conduct its strategy of "clear, hold, build"; and the ability of coalition troops to restore and defend Iraqi infrastructure, polling places, and borders have been directly proportional to the number of coalition soldiers in Iraq, not to the quality of their equipment. And there is no reason to imagine that this situation will change in any future counterinsurgency or stability operation. The recently released Quadrennial Defense Review insisted that the U.S. military should remain able to conduct such operations in the future on a large scale and for prolonged periods. Making that possible, however--not to mention ensuring U.S. preeminence in conventional warfare--means maintaining large ground forces. Indeed, Washington will need a large pool of trained and ready soldiers for all sorts of conflicts at every point along the spectrum for decades to come.

#### Perceived US weapons cause attacks on US commercial satellites – that’s the largest internal link to hegemony.

Hartung, senior research fellow at the World Policy Institute at the New School, ‘5

[William, “Weapons in space put the world at risk”, 7/13, Seattle Post Intelligencer, http://seattlepi.nwsource.com/opinion/232239\_spacewea pons13.html]

But just because we can do something doesn't mean we should do it. For years space has served as a sanctuary where nations cooperate rather than confront one another. Satellites save lives and support our economy by predicting the weather, helping first responders provide emergency assistance, facilitating the delivery of humanitarian aid in cases of natural disaster and by making cell phones, pagers and modern financial transactions possible. A weapons-free space environment also allows the United States to maintain its military superiority by supporting state-of-the-art reconnaissance, communications and targeting capabilities. Placing weapons in space that can shoot down another nation's satellites will encourage them to respond in kind, putting U.S. satellites at risk.

#### Developing weapons first triggers an arms race that leads to nuclear war and turns heg.

Hitchens, CDI Vice President, ‘2

[Theresa, April 18 “Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons”,

http://www.cdi.org/missile-defense/spaceweapons.cfm]

China and Russia long have been worried about possible U.S. breakout on space-based weaponry. Officials from both countries have expressed concern that the U.S. missile defense program is aimed not at what Moscow and Beijing see as a non-credible threat from rogue-nation ballistic missiles, but rather at launching a long-term U.S. effort to dominate space. Both Russia and China also are key proponents of negotiations at the UN Conference on Disarmament to expand the 1967 Outer Space Treaty to ban all types of weapons. The effort to start talks known as PAROS, for "prevention of an arms race in outer space," has been stalled due in large part to the objection of the United States. For example, in November 2000, the United States was one of three countries (the others were Israel and Micronesia) to refuse to vote for a UN resolution citing the need for steps to prevent the arming of space. It is inconceivable that either Russia or China would allow the United States to become the sole nation with space-based weapons. "Once a nation embarks down the road to gain a huge asymmetric advantage, the natural tendency of others is to close that gap. An arms race tends to develop an inertia of its own," writes Air Force Lt. Col. Bruce M. DeBlois, in a 1998 article in Airpower Journal. Chinese moves to put weapons in space would trigger regional rival India to consider the same, in turn, spurring Pakistan to strive for parity with India. Even U.S. allies in Europe might feel pressure to "keep up with the Joneses." It is quite easy to imagine the course of a new arms race in space that would be nearly as destabilizing as the atomic weapons race proved to be. Such a strategic-level space race could have negative consequences for U.S. security in the long run that would outweigh the obvious (and tremendous) short-term advantage of being the first with space-based weapons. There would be direct economic costs to sustaining orbital weapon systems and keeping ahead of opponents intent on matching U.S. space-weapon capabilities — raising the proverbial question of whether we would be starting a game we might not be able to win. (It should be remembered that the attacker will always have an advantage in space warfare, in that space assets are inherently static, moving in predictable orbits. Space weapons, just like satellites, have inherent vulnerabilities.) Again, the price tag of space weapons systems would not be trivial — with maintenance costs a key issue. For example, it now costs commercial firms between $300 million and $350 million to replace a single satellite that has a lifespan of about 15 years, according to Ed Cornet, vice president of Booz Allen and Hamilton consulting firm. Many experts also argue there would be costs, both economic and strategic, stemming from the need to counter other asymmetric challenges from those who could not afford to be participants in the race itself. Threatened nations or non-state actors might well look to terrorism using chemical or biological agents as one alternative. Karl Mueller, now at RAND, in an analysis for the School of Advanced Airpower Studies at Maxwell Air Force Base, wrote, "The United States would not be able to maintain unchallenged hegemony in the weaponization of space, and while a space-weapons race would threaten international stability, it would be even more dangerous to U.S. security and relative power projection capability, due to other states' significant ability and probably inclination to balance symmetrically and asymmetrically against ascendant U.S. power." Spurring other nations to acquire space-based weapons of their own, especially weapons aimed at terrestrial targets, would certainly undercut the ability of U.S. forces to operate freely on the ground on a worldwide basis — negating what today is a unique advantage of being a military superpower.

#### False alarms guarantee escalation – prefer the magnitude of our internal link to conflict escalation.

Lewis, Post doctorate Fellow in the Advanced Methods of Cooperative Security Program, ‘4

[Jeffrey, July “What if Space Were Weaponized? Possible Consequences for Conflict Scenarios” Center for Defense Information,

http://www.cdi.org/PDFs/scenarios.pdf]

All of these incidents have a common theme – that confidence is often the difference between war and peace. In times of crisis, false alarms can have a momentum of their own. As in the second scenario in this monograph, the lesson is that commanders rely on the steady flow of reliable information. When that information flow is disrupted – whether by a deliberate attack or an accident – confidence collapses and the result is panic and escalation. Introducing ASAT weapons into this mix is all the more dangerous, because such weapons target the elements of the command system that keep leaders aware, informed and in control. As a result, the mere presence of such weapons is corrosive to the confidence that allows national nuclear forces to operate safely.

#### Weaponization causes accidental war and ensures preemptive nuclear attacks.

Rosenberg, Journalist, ‘4

[Barry, 2004, Carnegie Challenge, “The Weaponization of Space: Divided Viewpoints, Uncertain Directions,

http://www.carnegie.org/pdf/weap\_space\_chal\_paper.pdf]

War games have shown that the introduction of space-based anti-satellite weapons contributes to what is called “crisis instability,” which means that the use of such weapons tends to propel the crisis to greater dan­ger. Destroying a nation’s surveillance and commu­nications satellites is equivalent to taking out its eyes and ears, and would likely lead to a desperate military response by the nation “in the dark.” “A nation without its eyes and ears would have to as­sume the worst, and could resort to the use of nuclear weapons,” says Hitchens. “Anti-satellite weapons are proactive weapons, and people will respond [at the very least] by developing asymmetric systems such as computer hacking and terror attacks.”The eyes-and-ears argument is graphically illustrated when examining how greatly the U.S. military relies on satellite-guided missiles for conventional warfare. For the most part, such weapons use the orbiting Global Positioning System for guidance and targeting.

#### **Even if SMRs are developed, there still are barriers to space satelites. Numerous countervailing forces – like political opposition, technical barriers and high launch costs make it politically inoperable around the world. That’s 1NC Hitchens.**