# Round 2 v Central Florida JM

## 1AC

### Plan

#### The United States Department of Defense should procure small modular reactors for use on military bases in the United States.

### Grid

#### Grid disruptions are inevitable - only SMR’s can solve**Robitaille 12**

(George, Department of Army Civilian, United States Army War College, “Small Modular Reactors: The Army’s Secure Source of Energy?” 21-03-2012, Strategy Research Project)

In recent years, the U.S Department of Defense (DoD) has identified a security issue at our installations related to the dependence on the civilian electrical grid. 1 The DoD depends on a steady source of electricity at military facilities to perform the functions that secure our nation. The flow of electricity into military facilities is controlled by a public grid system that is susceptible to being compromised because of the age of the infrastructure, damage from natural disasters and the potential for cyber attacks. Although most major functions at military installations employ diesel powered generators as temporary backup, the public grid may not be available to provide electricity when it is needed the most. The United States electrical infrastructure system is prone to failures and susceptible to terrorist attacks. 2 It is critical that the source of electricity for our installations is reliable and secure. In order to ensure that our military facilities possess a secure source of electricity, either the public system of electric generation and distribution is upgraded to increase its reliability as well as reducing its susceptibility to cyber attack or another source of electricity should be pursued. Although significant investments are being made to upgrade the electric grid, the current investment levels are not keeping up with the aging system. Small modular reactors (SMRs) are nuclear reactors that are about an order of magnitude smaller than traditional commercial reactor used in the United States. SMRs are capable of generating electricity and at the same time, they are not a significant contributor to global warming because of green house gas emissions. The DoD needs to look at small modular nuclear reactors (SMRs) to determine if they can provide a safe and secure source of electricity. Electrical Grid Susceptibility to Disruptions According to a recent report by the Defense Science Board, the DoD gets ninety nine percent of their electrical requirements from the civilian electric grid. 3 The electric grid, as it is currently configured and envisioned to operate for the foreseeable future, may not be reliable enough to ensure an uninterrupted flow of electricity for our critical military facilities given the influences of the aging infrastructure, its susceptibility to severe weather events, and the potential for cyber attacks. The DoD dependency on the grid is reflected in the $4.01 Billion spent on facilities energy in fiscal year 2010, the latest year which data was available. 4 The electricity used by military installations amounts to $3.76 billion. 5 As stated earlier, the DoD relies on the commercial grid to provide a secure source of energy to support the operations that ensure the security of our nation and it may not be available when we need it. The system could be taken down for extended periods of time by failure of aging components, acts of nature, or intentionally by cyber attacks. Aging Infrastructure. The U.S electric power grid is made up of independently owned power plants and transmission lines. The political and environmental resistance to building new electric generating power plants combined with the rise in consumption and aging infrastructure increases the potential for grid failure in the future. There are components in the U.S. electric grid that are over one hundred years old and some of the recent outages such as the 2006 New York blackout can be directly attributed to this out of date, aging infrastructure. 6 Many of the components of this system are at or exceeding their operational life and the general trend of the utility companies is to not replace power lines and other equipment until they fail. 7 The government led deregulation of the electric utility industry that started in the mid 1970s has contributed to a three decade long deterioration of the electric grid and an increased state of instability. Although significant investments are being made to upgrade the electric grid, the many years of prior neglect will require a considerable amount of time and funding to bring the aging infrastructure up to date. Furthermore, the current investment levels to upgrade the grid are not keeping up with the aging system. 8 In addition, upgrades to the digital infrastructure which were done to increase the systems efficiency and reliability, have actually made the system more susceptible to cyber attacks. 9 Because of the aging infrastructure and the impacts related to weather, the extent, as well as frequency of failures is expected to increase in the future. Adverse Weather. According to a 2008 grid reliability report by the Edison Electric Institute, sixty seven per cent of all power outages are related to weather. Specifically, lightning contributed six percent, while adverse weather provided thirty one percent and vegetation thirty percent (which was predominantly attributed to wind blowing vegetation into contact with utility lines) of the power outages. 10 In 1998 a falling tree limb damaged a transformer near the Bonneville Dam in Oregon, causing a cascade of related black-outs across eight western states. 11 In August of 2003 the lights went out in the biggest blackout in North America, plunging over fifty million people into darkness over eight states and two Canadian provinces. Most areas did not have power restored four or five days. In addition, drinking water had to be distributed by the National Guard when water pumping stations and/or purification processes failed. The estimated economic losses associated with this incident were about five billion dollars. Furthermore, this incident also affected the operations of twenty two nuclear plants in the United States and Canada. 12 In 2008, Hurricane Ike caused approximately seven and a half million customers to lose power in the United States from Texas to New York. 13 The electric grid suffered numerous power outages every year throughout the United States and the number of outages is expected to increase as the infrastructure ages without sufficient upgrades and weather-related impacts continue to become more frequent. Cyber Attacks. The civilian grid is made up of three unique electric networks which cover the East, West and Texas with approximately one hundred eighty seven thousand miles of power lines. There are several weaknesses in the electrical distribution infrastructure system that could compromise the flow of electricity to military facilities. The flow of energy in the network lines as well as the main distribution hubs has become totally dependent on computers and internet-based communications. Although the digital infrastructure makes the grid more efficient, it also makes it more susceptible to cyber attacks. Admiral Mr. Dennis C. Blair (ret.), the former Director of National Intelligence, testified before Congress that “the growing connectivity between information systems, the Internet, and other infrastructures creates opportunities for attackers to disrupt telecommunications, electrical power, energy pipelines, refineries, financial networks, and other critical infrastructures. 14 ” The Intelligence Community assesses that a number of nations already have the technical capability to conduct such attacks. 15 In the 2009 report, Annual Threat Assessment of the Intelligence Community for the Senate Armed Services Committee, Adm. Blair stated that “Threats to cyberspace pose one of the most serious economic and national security challenges of the 21st Century for the United States and our allies.”16 In addition, the report highlights a growing array of state and non-state actors that are targeting the U.S. critical infrastructure for the purpose of creating chaos that will subsequently produce detrimental effects on citizens, commerce, and government operations. These actors have the ability to compromise, steal, change, or completely destroy information through their detrimental activities on the internet. 17 In January 2008, US Central Intelligence Agency senior analyst Tom Donahue told a gathering of three hundred international security managers from electric, water, oil & gas, and other critical industry, that data was available from multiple regions outside the United States, which documents cyber intrusions into utilities. In at least one case (outside the U.S.), the disruption caused a power outage affecting multiple cities. Mr. Donahue did not specify who executed these attacks or why, but did state that all the intrusions were conducted via the Internet. 18 During the past twenty years, advances in computer technologies have permeated and advanced all aspects of our lives. Although the digital infrastructure is being increasingly merged with the power grid to make it more efficient and reliable, it also makes it more vulnerable to cyber attack. In October 2006, a foreign hacker invaded the Harrisburg, PA., water filtration system and planted malware. 19 In June 2008, the Hatch nuclear power plant in Georgia shut down for two days after an engineer loaded a software update for a business network that also rebooted the plant's power control system. In April 2009, The Wall Street Journal reported that cyber spies had infiltrated the U.S. electric grid and left behind software that could be used to disrupt the system. The hackers came from China, Russia and other nations and were on a “fishing expedition” to map out the system. 20 According to the secretary of Homeland Security, Janet Napolitano at an event on 28 October 2011, cyber–attacks have come close to compromising the country’s critical infrastructure on multiple occasions. 21 Furthermore, during FY11, the United States Computer Emergency Readiness Team took action on more than one hundred thousand incident reports by releasing more than five thousand actionable cyber security alerts and information products. 22 The interdependence of modern infrastructures and digital based systems makes any cyber attacks on the U.S. electric grid potentially significant. The December 2008 report by the Commission on Cyber Security for the forty fourth Presidency states the challenge plainly: “America’s failure to protect cyberspace is one of the most urgent national security problems facing the new administration”. 23 The susceptibility of the grid to being compromised has resulted in a significant amount of resources being allocated to ensuring the systems security. Although a substantial amount of resources are dedicated to protecting the nation’s infrastructure, it may not be enough to ensure the continuous flow of electricity to our critical military facilities. SMRs as they are currently envisioned may be able to provide a secure and independent alternative source of electricity in the event that the public grid is compromised. SMRs may also provide additional DoD benefit by supporting the recent government initiatives related to energy consumption and by circumventing the adverse ramifications associated with building coal or natural gas fired power plants on the environment.\

#### Cyber-attack’s coming ---actors are probing US grid weaknesses

Reed 10/11

John, Reports on the frontiers of cyber war and the latest in military technology for Killer Apps at Foreign Policy, "U.S. energy companies victims of potentially destructive cyber intrusions", 2012, killerapps.foreignpolicy.com/posts/2012/10/11/us\_energy\_companies\_victims\_of\_potentially\_destructive\_cyber\_attacks

Foreign actors are probing the networks of key American companies in an attempt to gain control of industrial facilities and transportation systems, Defense Secretary Leon Panetta revealed tonight.¶ "We know that foreign **cyber actors are probing America's critical infrastructure networks**," said Panetta, disclosing previously classified information during a speech in New York laying out the Pentagon's role in protecting the U.S. from cyber attacks. "They are targeting the computer control systems that operate chemical, **electricity** and water plants, and those that guide transportation thorough the country."¶ He went on to say that the U.S. government knows of "specific instances where intruders have gained access" to these systems -- frequently known as Supervisory Control and Data Acquisition (or SCADA) systems -- and that "they are seeking to create advanced tools to attack these systems and cause panic, destruction and even the loss of life," according to an advance copy of his prepared remarks.¶ The secretary said that **a coordinated attack on enough critical infrastructure could be a "cyber Pearl Harbor" that would "cause physical destruction and loss of life, paralyze and shock the nation, and create a profound new sense of vulnerability.**"¶ While there have been reports of criminals using 'spear phishing' email attacks aimed at stealing information about American utilties, Panetta's remarks seemed to suggest more sophisticated, nation-state backed attempts to actually gain control of and damage power-generating equipment. ¶ Panetta's comments regarding the penetration of American utilities echo those of a private sector cyber security expert Killer Apps spoke with last week **who said that the networks of American electric companies were penetrated, perhaps in preparation for a Stuxnet-style attack**.¶ Stuxnet is the famous cyber weapon that infected Iran's uranium-enrichment centrifuges in 2009 and 2010. Stuxnet is believed to have caused some of the machines to spin erratically, thereby destroying them.¶ "**There is hard evidence** that there has been penetration of our power companies, and given Stuxnet, that is a staging step before destruction" of electricity-generating equipment, the expert told Killer Apps. Because uranium centrifuges and power turbines are both spinning machines, "**the attack is identical -- the one to take out the centrifuges and the one to take out our power systems is the same attack**."¶ "If a centrifuge running at the wrong speed can blow apart" so can a power generator, said the expert. "If you do, in fact, spin them at the wrong speeds, you can blow up any rotating device."¶ Cyber security expert Eugene Kaspersky said two weeks ago that one of his greatest fears is someone reverse-engineering a sophisticated cyber weapon like Stuxnet **-- a relatively easy task** -- and he noted that Stuxnet itself passed through power plants on its way to Iran. "Stuxnet infected thousands of computer systems all around the globe, I know there were power plants infected by Stuxnet very far away from Iran," Kaspersky said.

#### Disruptions cause nuclear lashout – SMRs solve but renewables fail

Andres and Breetz 11

(Richard B. Andres is Professor of ¶ national Security Strategy at the ¶ national War College and a Senior fellow and energy and environmental ¶ Security and Policy Chair in the Center ¶ for Strategic research, institute for national Strategic Studies, at the national Defense University. Hanna L. Breetz is a doctoral candidate in the Department of Political Science at the Massachusetts institute of technology, “Small Nuclear Reactors ¶ for Military Installations:¶ Capabilities, Costs, and ¶ Technological Implications” Institute for National Strategic Studies, <http://www.ndu.edu/press/lib/pdf/strforum/sf-262.pdf>, SEH)

Grid Vulnerability**. DOD is unable to provide its ¶ bases with electricity when the civilian electrical grid is ¶ offline for an extended period of time**. Currently, domestic military installations receive 99 percent of their ¶ electricity from the civilian power grid. As explained in a ¶ recent study from the Defense Science Board:¶ DOD’s key problem with electricity is **that** critical ¶ missions, such as national strategic awareness and ¶ national command authorities, are **almost entirely ¶** dependent on the **national transmission** grid. . . ¶ **[which] is fragile, vulnerable, near its capacity ¶ limit, and outside of DOD control**. In most cases, ¶ **neither the grid nor on-base backup power provides¶ sufficient reliability to ensure continuity of critical ¶ national priority functions and oversight of ¶ strategic missions in the face of** a long term (several ¶ months) **outage**.¶ 7¶ The grid’s fragility was demonstrated during the 2003 ¶ Northeast blackout in which 50 million people in the ¶ United States and Canada lost power, some for up to a ¶ week, when one Ohio utility failed to properly trim trees. ¶ The blackout created cascading disruptions in sewage ¶ systems, gas station pumping, cellular communications, ¶ border check systems, and so forth, and demonstrated the ¶ interdependence of modern infrastructural systems.¶ 8¶ More recently, awareness has been growing that ¶ **the grid is also vulnerable to purposive attacks**. A report sponsored by the Department of Homeland Security suggests **that a coordinated cyberattack on the grid ¶ could result in a third of the country losing power for ¶ a period of weeks or months**.¶ 9¶ Cyberattacks on critical ¶ infrastructure are not well understood. It is not clear, for ¶ instance, whether existing terrorist groups might be able ¶ to develop the capability to conduct this type of attack. **It ¶ is likely, however, that some nation-states either have or ¶ are working on developing the ability to take down the ¶ U.S. grid**. **In the event of a war** with one of these states, ¶ it is possible, if not likely, that **parts of the civilian grid ¶ would cease to function, taking with them military bases ¶ located in affected regions.**¶ Government and private organizations are currently ¶ working to secure the grid against attacks; however, it is ¶ not clear that they will be successful. Most military bases ¶ currently have backup power that allows them to function for a period of hours or, at most, a few days on their ¶ own. If power were not restored after this amount of time, ¶ the results could be disastrous. First, military assets taken ¶ offline by the crisis would not be available to help with disaster relief. Second, **during an extended blackout, global ¶ military operations could be seriously compromised; this ¶ disruption would be particularly serious if the blackout ¶ was induced during major combat operations.** During the ¶ Cold War, this type of event was far less likely because the United States and Soviet Union shared the common understanding that blinding an opponent with a grid blackout could escalate to nuclear war. America’s current opponents, however, may not share this fear or be deterred ¶ by this possibility.¶ In 2008, the Defense Science Board stressed that ¶ DOD should mitigate the electrical grid’s vulnerabilities by turning military installations into “islands” of ¶ energy self-sufficiency.¶ 10¶ **The department has made efforts to do so by promoting efficiency programs** that ¶ lower power consumption on bases and by constructing ¶ renewable power generation facilities on selected bases. ¶ Unfortunately, these programs **will not come close to ¶** reaching the goal of **islanding** thevast majority of bases**. ¶ Even with** massive investment in efficiency and **renewables,** most **bases would not** be able to **function for more ¶ than a few days after the** civilian **grid went offline**. **Unlike other alternative sources of energy, small reactors have the potential to solve DOD’s vulnerability to ¶ grid outages.** **Most bases have relatively light power demands when compared to civilian towns or cities. Small ¶ reactors could easily support bases’ power demands separate from the civilian grid during crises**. In some cases, ¶ the reactors could be designed to produce enough power ¶ not only to supply the base, but also to provide critical ¶ services in surrounding towns during long-term outages.¶ Strategically, islanding bases with small reactors ¶ has another benefit. **One of the main reasons an enemy ¶ might be willing to risk reprisals by taking down the ¶ U.S. grid during a period of military hostilities would ¶ be to affect ongoing military operations. Without the ¶ lifeline of intelligence, communication, and logistics ¶ provided by U.S. domestic bases, American military operations would be compromised in almost any conceivable contingency. Making bases more resilient to ¶ civilian power outages would reduce the incentive for ¶ an opponent to attack the grid.** An opponent might ¶ still attempt to take down the grid for the sake of disrupting civilian systems, but **the powerful incentive to ¶ do so in order to win an ongoing battle or war would ¶ be greatly reduced.**

#### Grid failures risks terrorism

Defense Science Board 8

(The DSB is a Federal ¶ Advisory Committee established to provide independent advice to the Secretary of ¶ Defense, “More Fight – Less Fuel” <http://www.acq.osd.mil/dsb/reports/ADA477619.pdf>, SEH)

**DoD’s key problem with electricity is that critical missions, such as national strategic** ¶ **awareness and national command authorities, are almost entirely dependent on the** ¶ **national transmission grid.** About 85% of the energy infrastructure upon which DoD ¶ depends is commercially owned, **and 99% of the electrical energy DoD installations** ¶ **consume originates outside the fence.**¶ 3¶ As noted below, however, the grid is fragile, ¶ vulnerable, near its capacity limit, and outside of DoD control. In most cases, neither ¶ the grid nor on-base backup power provides sufficient reliability to ensure continuity of ¶ critical national priority functions and oversight of strategic missions in the face of a long ¶ term (several months) outage. ¶ 2.3.1 State of the Grid ¶ The U.S.-Canadian electric grid is very efficient and cost effective but its design metric ¶ is efficiency more than resiliency. As a consequence, it is vulnerable to natural disaster or deliberate attack. The Task Force received several briefings from the Mission ¶ Assurance Division at Dahlgren (MAD), the Department of Energy and the utility ¶ industry. Based on these briefings, the Task Force is concerned about the condition of ¶ the grid and the ability to effect timely repairs. ¶ This concern extends not only to the complete dependency of critical national security ¶ missions on the grid, but also to its centrality to all facets of the nation’s economic life. ¶ To appreciate the seriousness of the impacts of an extended disruption, consider the ¶ 2003 Northeast blackout. At around 4:15pm EST on August 14, 2003 about 50 million ¶ people living in a 9,300 square mile area in the U.S. and Canada lost electrical power. ¶ More than 500 generating units at 265 power plants shut down during the outage, 22 of ¶ which were nuclear. Those plants took about two weeks to regain full capacity, and lost ¶ an average of more than half their capacity for 12 days. The shutdown was in part ¶ precautionary in nature. If an imbalance between load and supply occurs, power lines ¶ grow longer and sag from overheating and other hardware can fail. These imbalances ¶ can damage equipment that is hard-to-repair, requires long lead time to produce and is ¶ expensive. So, the grid quickly disconnects itself when a threatening imbalance is ¶ detected. Nuclear plants are required for safety reasons to shut down when the grid ¶ they’re connected to is de-energized.¶ 4¶ A U.S.-Canada Task Force found the main cause of the blackout to be the failure of a ¶ utility in Ohio to properly trim trees near a power line, causing the first in what became a ¶ set of cascading failures.¶ 5¶ Secretary of Energy Spencer Abraham said there would be ¶ no punishment for the utility because current U.S. law does not require electric reliability ¶ standards. However, the Energy Policy Act of 2005 (EPAct 2005) gave the Federal ¶ Energy Regulatory Commission (FERC) new authority to direct the industry to develop ¶ reliability standards. It directs FERC to designate an Electric Reliability Organization ¶ (ERO) to develop and propose reliability standards, which only after agreement by the ¶ industry become mandatory. The ERO chosen by the FERC is a volunteer, industry run ¶ organization. While FERC oversight of industry developed standards is an ¶ improvement over the previous situation, the Task Force remains concerned that FERC ¶ may be unable to reduce the risk to critical DoD missions to acceptable levels in a ¶ reasonable timeframe. ¶ **Some have argued that the August 2003 incident shows that the protections built into** ¶ **the grid worked. Within several hours electricity was restored to many areas, though a** ¶ **few areas waited nearly a week. However, the incident highlights how easily the power** ¶ **grid could be taken down. Also, quick restoration was possible because no significant** ¶ **equipment was damaged, something that might not occur in future incidents**. **Further,** ¶ **during the blackout most systems failed that would detect unauthorized border** ¶ **crossings, port landings, or unauthorized access to vulnerable sites. Future such blackouts could be exploited for terrorist activity, with potentially far more catastrophic** ¶ **results**. ¶ These risks exist elsewhere than in the U.S. For example, on September 28, 2003 Italy ¶ experienced the largest of a series of blackouts suffered through that year, affecting a ¶ total of 56 million people, and spilling into Switzerland.¶ 6¶ It was also the most serious ¶ blackout in Italy in 20 years. DoD installations located outside the continental United ¶ States (OCONUS) are dependent on the commercial grids serving their locations. ¶ Security of their power supplies and continuation of their missions is as important as ¶ within the U.S.

#### Numerous attempts prove our impact

Wagner 9/11

(Dr. Abraham R. Wagner is a Professor of International and Public Affairs at the ¶ Arnold A. Saltzman Institute of War & Peace Studies at Columbia University. “Counter-Terrorism Technologies -- Taking Stock on 9/11” 09/11/2012 2:13 pm accessed online September 11, 2012 at <http://www.huffingtonpost.com/abraham-r-wagner/counterterrorism-technolo_b_1874521.html>, TSW)

On this 11th anniversary of the 9/11 attacks, it makes sense to take stock of where the nation has progressed in its effort to deter and combat future terrorist attacks, both at home and abroad. The **9/11 attacks came** as a shock, and **have** rightfully **come** **to be regarded as a major U.S. intelligence failure**. **In the aftermath**, **the nation undertook significant organizational reforms designed to enable more effective intelligence** and law enforcement operations against evolving terrorist threats. **The** **country also looked to see what science, engineering and technology could do to help addresses these threats**.¶ Technology has long been the nation's strong suit. Americans tend to believe that where there is a problem, there must certainly be a solution and it most likely involves technology and money. **During the decade that followed 9/11, billions of dollars were spent on a vast range of programs and technologies in the name of counter-terrorism**. For the first two years after 9/11, I joined with other scientists and engineers at the Department of Defense and the Intelligence Community in efforts to identify the most promising approaches to the problem. Ultimately we found that there was no magic bullet or perfect solution to this thorny problem, but were able to suggest a range of investments that could be made to address the evolving terrorist threat.¶ An honest assessment of these investments in counter-terrorism technologies reveals that the results have been mixed -- as one might well expect. A combination of **greatly improved intelligence** and law enforcement personnel have **employed some of the better technologies with considerable success**. Indeed, some **45 terrorist plots have been stopped** and others deterred. How much of **this has been** simply luck and how much can be traced to any **new technology program** is a matter of debate, and there are **clearl**y **examples** of both that **can be found.**¶ **One area where technology has made a significant contribution has been in new systems to aid in intelligence and surveillance against terrorist operations.** While terrorists may hold to an eighth century ideology, they have not been reluctant to employ 21st century communications and information technologies. They have utilized the Internet and cell phones for a number of purposes, and at the time of 9/11 the nation was in need of systems to intercept and sort out terrorist communications. While highly sensitive, public disclosures about several key programs show that considerable progress has been made in this critical area, giving the intelligence agencies some key tools in locating terrorists and stopping their plots. Aside from communications intercept, a new area of "data mining" has also shown considerable promise in locating terrorists and their plots.¶ At the same time, several of key surveillance programs used for counter-terrorism have come under fire from civil liberties groups as being unconstitutional violations of the Fourth Amendment privacy protections, and others. Critics of the Bush Administration saw this as "running roughshod over the Constitution." Even now there are still federal court challenges to laws such as the 2008 FISA Amendments Act and others that have enabled counter-terrorist efforts since 9/11. Ultimately a balance needs to be struck between the essential needs for intelligence to thwart future attacks and protected privacy rights, but as yet it remains an unsettled area where the Supreme Court will need to rule at some future point in time.¶ Less controversial have been efforts over the past decade to employ new information technologies to what has been termed the Information Sharing Environment -- collaborative efforts to best utilize available intelligence and other data among the various federal, state and local agencies with counter-terrorism responsibilities. While certainly some progress has been made over the past 11 years, the net result is largely a national embarrassment, and clearly a triumph of politics over physics. The information and communications technologies are all well-developed, but multiple bureaucracies have generated a set of plans and an even larger set of excuses as to why the fundamental problems in this area remain to be solved.

#### Terrorists are targeting Syrian bioweapons now and will use them

Blair ‘12

(Charles P. Blair joined FAS in June 2010. He is the Senior Fellow on State and Non-State Threats. Born and raised in Los Alamos, New Mexico, Mr. Blair was an exchange student in Moscow in the mid-1980s, witnessing firsthand the closing salvos of the Cold War. Since the end of that era, Mr. Blair has worked on issues relating to the diffusion and diversification of weapons of mass destruction (WMD) in the context of proliferation amid the rise of mass casualty terrorism incidents and the centripetal and centrifugal elements of globalization. Mr. Blair’s work focuses on state and violent non-state actors (VNSA) – amid a dystopic and increasingly tribal world. “Fearful of a nuclear Iran? The real WMD nightmare is Syria” 1 MARCH 2012 accessed online August 22, 2012 at http://www.thebulletin.org/web-edition/op-eds/fearful-of-nuclear-iran-the-real-wmd-nightmare-syria)

As possible military action against Iran's suspected nuclear weapons program looms large in the public arena, far **more international concern should be directed toward Syria and its weapons of mass destruction.** When the Syrian uprising began more than a year ago, few predicted the regime of President Bashar al-Assad would ever teeter toward collapse. Now, though, **the demise of Damascus's** current **leadership** **appears inevitable**, **and Syria's revolution will likely be an unpredictable**, protracted, and grim affair. **Some see similarities with Libya's civil wa**r, **during which persistent fears revolved around terrorist seizure of Libyan chemical weapons**, or the Qaddafi regime's use of them against insurgents. **Those fears turned out to be unfounded**.¶ **But the Libyan chemical stockpile consisted of several tons of aging mustard gas** leaking from a half-dozen canisters **that would have been impossible to utilize as weapons**. **Syria** likely **has one of the largest and most sophisticated chemical weapon programs in the world**. Moreover, **Syria may also possess an offensive biol**ogical **weapons capability that Libya did not**.¶ While it is uncertain whether the Syrian regime would consider using WMD against its domestic opponents, Syrianinsurgents, unlike many of their Libyan counterparts, are increasingly sectarian and radicalized; indeed, many observers fear the uprising is being "hijacked" by jihadists. **Terrorist groups active in the Syrian uprising have already demonstrated little compunction about the acquisition and use of WMD**. In short, should Syria devolve into full-blown civil-war, **the security of** **its WMD should be of profound concern**, as sectarian insurgents and Islamist terrorist groups may **stand poised** **to seize** chemical and perhaps even **bio**logical **weapons.**¶ An enormous unconventional arsenal. Syria's chemical weapons stockpile is thought to be massive. One of only eight nations that is not a member of the Chemical Weapons Convention -- an arms control agreement that outlaws the production, possession, and use of chemical weapons -- Syria has a chemical arsenal that includes several hundred tons of blistering agents along with likely large stockpiles of deadly nerve agents, including VX, the most toxic of all chemical weapons. At least four large chemical weapon production facilities exist. Additionally, Syria likely stores its deadly chemical weapons at dozens of facilities throughout the fractious country. In contrast to Libya's unusable chemical stockpile, analysts emphasize that **Syrian** chemical **agents** **are weaponized and deliverable**. Insurgents and **terrorists** with past or present connections to the military **might feasibly be able to effectively disseminate** chemical **agents over large populations**. (The Global Security Newswire recently asserted that "[t]he Assad regime is thought to possess between 100 and 200 Scud missiles carrying warheads loaded with sarin nerve agent. The government is also believed to have several hundred tons of sarin agent and mustard gas stockpiled that could be used in air-dropped bombs and artillery shells, according to information compiled by the James Martin Center.")¶ Given its robust chemical weapons arsenal and its perceived need to deter Israel, **Syria has** long been suspected of having **an active biological weapons program**. Despite signing the Biological Weapons and Toxins Convention in 1972 (the treaty prohibits the development, production, and stockpiling of biological and toxin weapons), Syria never ratified the treaty. Some experts contend that any Syrian biological weapons program has not moved beyond the research and development phase. Still, **Syria's biotechnical infrastructure undoubtedly has the capability to develop numerous biological weapon agents**. After Israel destroyed a clandestine Syrian nuclear reactor in September 2007, Damascus may have accelerated its chemical and biological weapons programs.¶ **It's hard to guard WMD when a government collapses**. **Although the U**nited **S**tates and its allies **are** reportedly **monitoring** **Syria's** chemical **weapons**, **recent history warns that securing them from theft or transfer is an extraordinary challenge**. For example, during Operation Iraqi Freedom, more than 330 metric tons of military-grade high explosives vanished from Iraq's Al-Qaqaa military installation. Almost 200 tons of the most powerful of Iraq's high-explosives, HMX -- used by some states to detonate nuclear weapons -- was under International Atomic Energy Agency seal. Many tons of Al-Qaqaa's sealed HMX reportedly went missing in the early days of the war in Iraq. Forensic tests later revealed that some of these military-grade explosives were subsequently employed against US and coalition forces.¶ Even with a nationwide presence of 200,000 coalition troops, several other sensitive military sites were also looted, including Iraq's main nuclear complex, Tuwaitha. Should centralized authority crumble in Syria, it seems highly unlikely that the country's 50 chemical storage and manufacturing facilities -- and, possibly, biological weapon repositories -- can be secured. The US Defense Department recently estimated that it would take more than 75,000 US military personnel to guard Syria's chemical weapons. This is, of course, if they could arrive before any WMD were transferred or looted -- a highly unlikely prospect.¶ Complicating any efforts to secure Syria's WMD, post-Assad, are its porous borders. **With Syria's government distracted by internal revolt and US forces now fully out of Iraq**, **it is plausible that stolen** chemical or **bio**logical **weapons** **could find their way across the Syrian border** **into Iraq**. Similarly, Syrian WMD could be smuggled into southern Turkey, Jordan, Lebanon, the West Bank, Israel, and, potentially, the United States and Europe.¶ **At least six formal terrorist organizations have long maintained personnel within Syria.** **Three of these groups** -- **Hamas, Hizbollah, and Palestinian Islamic Jihad** -- **have already attempted to acquire** or use chemical or **biological agents**, or both. Perhaps more troubling, **Al Qaeda-affiliated fighters from Iraq have streamed into Syria**, acting, in part, on orders from Al Qaeda leader Ayman al-Zawahiri. In the past, Al Qaeda-in-Iraq fighters attempted to use chemical weapons, most notably attacks that sought to release large clouds of chlorine gas. The entry of Al Qaeda and other jihadist groups into the Syrian crisis underscores its increasingly sectarian manifestation. Nearly 40 percent of Syria's population consists of members of minority communities. Syria's ruling Alawite regime, a branch of Shia Islam, is considered heretical by many of Syria's majority Sunni Muslims -- even those who are not jihadists. Alawites, Druze, Kurds, and Christians could all become targets for WMD-armed Sunni jihadists. Similarly, Shiite radicals could conceivably employ WMD agents against Syria's Sunnis.¶ Religious fanaticism and WMD. Evidence of growing religious fanaticism is also reflected in recent Syrian suicide attacks. Since last December, at least five suicide attacks occurred in Syria. In the 40 years preceding, only two suicide attacks were recorded. Al Qaeda-linked mujahidin are believed to be responsible for all of these recent attacks. Civil wars are often the most violent and unpredictable manifestations of war. With expanding sectarian divisions, the use of seized WMD in Syria's uprising is plausible. To the extent that religious extremists believe that they are doing God's bidding, fundamentally any action they undertake is justified, no matter how abhorrent, since the "divine" ends are believed to legitimize PDF the means.¶ The situation in Syria is unprecedented. Never before has a WMD-armed country fallen into civil war. All states in the region stand poised to lose if these weapons find their way outside of Syria. The best possible outcome, in terms of controlling Syria's enormous WMD arsenal, would be for Assad to maintain power, but such an outcome seems increasingly implausible. And there is painfully little evidence that democratic forces are likely to take over in Syria. Even if they do eventually triumph, it will take months or years to consolidate control over the entire country.¶ If chaos ensues in Syria, the United States cannot go it alone in securing hundreds of tons of Syrian WMD. Regional leaders -- including some, such as Sunni Saudi Arabia and Shiite Iran, that are now backing the insurgency and the regime, respectively -- must come together and begin planning to avert a dispersion of Syrian chemical or **biological weapons** that would **threaten everyone**, of any political or religious persuasion, in the Middle East and around the world.

#### New gene manipulation takes out your defense

MSNBC 2011

(“Clinton warns of bioweapon threat from gene tech,” pg online @ http://www.msnbc.msn.com/id/45584359/ns/… “For an international verification system — akin to that for nuclear weapons — saying it is too complicated to monitor every lab's activities.”)

GENEVA — New gene assembly technologythat offers great benefits for scientific research could also be used by terrorists to create biological weapons, U.S. Secretary of State Hillary Rodham Clinton warned Wednesday. **The** threat from bioweapons has drawn little attention in recent years, as governments focused more on the risk of nuclear weapons proliferation to countries such as Iran and North Korea. But experts have warned that the increasing ease with which bioweapons can be created might be used by terror groups to develop and spread new diseases that could mimic the effects of the fictional global epidemic portrayed in the Hollywood thriller **"**Contagion." Speaking at an international meeting in Geneva aimed at reviewing the 1972 Biological Weapons Convention, Clinton told diplomats that the challenge was to maximize the benefits of scientific research and minimize the risks that it could be used for harm. "The emerging gene synthesis industry is making genetic material more widely available**,"** she said. "This has many benefits for research, but it could also potentially be used to assemble the components of a deadly organism." Gene synthesis allows genetic material — the building blocks of all organisms — to be artificially assembled in the lab, greatly speeding up the creation of artificial viruses and bacteria. The U.S. government has cited efforts by terrorist networks such as al-Qaeda to recruit scientists capable of making biological weapons as a national security concern. "Acrude but effective terrorist weapon can be made using a small sample of any number of widely available pathogens, inexpensive equipment, and college-level chemistry and biology," Clinton told the meeting. "Less than a year ago**,** al-Qaeda in the Arabian Peninsula made a call to arms for, and I quote, 'brothers with degrees in microbiology or chemistry ... to develop a weapon of mass destruction**,'"** she said. Clinton also mentioned the Aum Shinrikyo cult's attempts in Japan to obtain anthrax in the 1990s, and the 2001 anthrax attack**s** in the United States that killed five people. Washington has urged countries to be more transparent about their efforts to clamp down on the threat of bioweapons. But U.S. officials have also resisted calls for an international verification system — akin to that for nuclear weapons — saying it is too complicated to monitor every lab's activities

#### Extinction

Ochs 2

**(**Richard, Naturalist – Grand Teton National park with Masters in Natural Resource Management – Rutgers, “Biological Weapons must be abolished immediately” 6-9, http://www.freefromterror.net/other\_articles/abolish.html)

Of all the weapons of mass destruction, the genetically engineered **biological weapons**, many without a known cure or vaccine, **are an extreme danger to the continued survival of life** on earth. Any perceived **military** value **or deterrence pales in comparison to the great risk these weapons pose just sitting in vials in laboratories.** While a "nuclear winter," resulting from a massive exchange of **nuclear weapons**, could also kill off most of life on earth and severely compromise the health of future generations, they **are easier to control**. **Biological weapons**, on the other hand**, can get out of control very easily**, as the recent anthrax attacks has demonstrated. There is no way to guarantee the security of these doomsday weapons because very tiny amounts can be stolen or accidentally released and then grow or be grown to horrendous proportions. The Black Death of the Middle Ages would be small in comparison to the potential damage bioweapons could cause. Abolition of chemical weapons is less of a priority because, while they can also kill millions of people outright, their persistence in the environment would be less than nuclear or biological agents or more localized. Hence, chemical weapons would have a lesser effect on future generations of innocent people and the natural environment. Like the Holocaust, once a localized chemical extermination is over, it is over. With nuclear and biological weapons, the killing will probably never end. Radioactive elements last tens of thousands of years and will keep causing cancers virtually forever. Potentially worse than that, bio-engineered agents by the hundreds with no known cure could wreck even greater calamity on the human race than could persistent radiation. AIDS and ebola viruses are just a small example of recently emerging plagues with no known cure or vaccine. Can we imagine hundreds of such plagues? **HUMAN EXTINCTION IS NOW POSSIBLE**.

### China

#### Global SMR development’s inevitable – only a question of whether the US leads

Hiruo 10
(Elaine, Managing Editor of Platts, "SMR technology gives US chance at market leadership, vendors say," 9-2-10, Lexis)

**The US** **nuclear industry lost its leadership** position **in the global market for large reactors and now has the opportunity to secure that role for s**mall **m**odular **r**eactor**s,** some SMR vendors told a subcommittee of the Blue Ribbon Commission on America's Nuclear Future August 30.¶ But they stressed their **companies will need the federal government's help to beat foreign competitors to the market.**¶ **"We're at a unique crossroads right now**," Christofer Mowry, president of Babcock and Wilcox Nuclear Energy, told the reactor and fuel cycle technology subcommittee during its two-day meeting in Washington. B&W is one of several US companies — including Hyperion Power Generation, NuScale and Westinghouse — developing an SMR design.¶ "Other countries want a technology that has been built in the host country first," Paul Lorenzini, CEO of NuScale, told the panel. "**There are lots of** small reactor **designs out there,**" he said. Both the Koreans and Japanese have SMR programs, according to industry executives on the speakers panel. **The question is**, Mowry said, **who enters the** global **market first with a reactor already operating on its home turf.**

#### SMR key to nuclear leadership - recovers leadership lost to China

Rosner and Goldberg 11

(Robert Rosner, astrophysicist and founding director of the Energy Policy Institute at Chicago. He was the director of Argonne National Laboratory from 2005 to 2009, Stephen Goldberg, Special Assistant to the Director, Argonne National Laboratory ¶ Senior Fellow, Energy Policy Institute at Chicago¶ Research Coordinator, Global Nuclear Future Initiative ¶ American Academy of Arts and Sciences, “Small Modular Reactors – Key to Future Nuclear Power ¶ Generation in the U.S.” Energy Policy Institute at Chicago, <http://csis.org/files/attachments/111129_SMR_White_Paper.pdf>, SEH)

As stated earlier, SMRs have the potential to achieve significant greenhouse gas emission¶ reductions. They could provide alternative baseload power generation to facilitate the retirement¶ of older, smaller, and less efficient coal generation plants that would, otherwise, not be good¶ candidates for retrofitting carbon capture and storage technology. They could be deployed in¶ regions of the U.S. and the world that have less potential for other forms of carbon-free¶ electricity, such as solar or wind energy. There may be technical or market constraints, such as¶ projected electricity demand growth and transmission capacity, which would support SMR¶ deployment but not GW-scale LWRs. From the on-shore manufacturing perspective, a key point¶ is that the manufacturing base needed for SMRs can be developed domestically. Thus, while the¶ large commercial LWR industry is seeking to transplant portions of its supply chain from current¶ foreign sources to the U.S., **the SMR industry offers the potential to establish a large domestic¶ manufacturing base building upon already existing U.S. manufacturing infrastructure and¶ capability,** **including the Naval shipbuilding and underutilized domestic nuclear component and¶ equipment plants**. The study team learned that a number of sustainable domestic jobs could be¶ created – that is, the full panoply of design, manufacturing, supplier, and construction activities –¶ if the U.S. can establish itself as a credible and substantial designer and manufacturer of SMRs.¶ While many SMR technologies are being studied around the world, a **strong U.S.¶ commercialization** program **can enable U.S. industry to be first to market SMRs,** thereby **serving¶ as a fulcrum for** export growth as well as a lever in **influencing international decisions on¶ deploying both** nuclear **reactor and** nuclear **fuel cycle tech**nology. **A** viable **U.S.-centric SMR¶ industry would** enablethe U.S. to **recapture** technological **leadership in** commercial **nuclear¶ tech**nology, **which has been lost to** suppliers in France, Japan, Korea, Russia, and, now rapidly¶ emerging, **China**.

#### Action now is key – any delay allows China to get ahead

Wheeler 12
(Brian, editor of Power Engineering magazine, "Developing Small Modular Reactor Designs in the U.S," 4-1-12, [http://www.power-eng.com/articles/npi/print/volume-5/issue-2/nucleus/developing-small-modular-reactor-designs-in-the-us.html-http://www.power-eng.com/articles/npi/print/volume-5/issue-2/nucleus/developing-small-modular-reactor-designs-in-the-us.html](http://www.power-eng.com/articles/npi/print/volume-5/issue-2/nucleus/developing-small-modular-reactor-designs-in-the-us.html-http%3A/www.power-eng.com/articles/npi/print/volume-5/issue-2/nucleus/developing-small-modular-reactor-designs-in-the-us.html))

The development of small modular reactors in the U.S. continues to gain support as the country searches for clean energy options. Although concepts are still being designed, **the U.S. D**epartment **o**f **E**nergy **gave the sector a boost** in March **when it released** **a** Funding Opportunity Announcement to establish **cost-shared agreements** **to support the design and licensing of SMRs.** A total of $450 million will be made available to support two SMRs over five years.¶ "America's choice is clear," said Energy Secretary Steven Chu. "We can either develop the next generation of clean energy technologies, which will help create thousands of jobs and export opportunities here in America, or we can wait for other countries to take the lead."¶ The Energy Department said SMRs are about one-third the size of current nuclear power plants and are designed to offer a host of safety, siting, construction and economic benefits. The size, according to DOE, makes SMRs ideal for small electric grids and locations that cannot support large reactors. Also, the reduced cost due to factory production may make the SMR more attractive to utilities seeking to add a smaller amount of power.¶ "We really see a market right now that includes utilities that don't have a large financial base and that are interested in clean, sustainable power. They are looking at the SMR as an investment of a billion dollars versus several billion dollars for large nuclear," said John Goossen, vice president of Innovation and SMR Development at Westinghouse. "These utilities, in most cases, do not need large chunks of power and are looking to add power incrementally as part of their plans for growth." In February, the Electric Power Research Institute and the Oak Ridge National Laboratory released a study that stated the U.S. has the potential to generate 201 GW from SMRs. For their study, a small modular reactor was labeled as 350 MWe or less. The DOE defines an SMR as 300 MWe or less. The study stated that "350 MWe was considered a reasonable bounding estimate of an initial SMR installation."¶ **The U.S. is leading the world in the amount of SMR designs, but China could be the first country to have a SMR design operational.** Launched in 2011, **a** 200 MWe HTR-PM **reactor is under construction with the support of China Huaneng Group, China Nuclear Engineering and Construction, and Tsinghua University's INET,** according to the World Nuclear Association.¶ "**The U.S. needs to move faster if we are going to compete with the** South Koreans, the **Chinese** and the Russians," said Bob Prince, vice chairman and CEO, Gen4 Energy.

**Ceding nuclear leadership to China leads to unchecked Chinese hege in Asia - kill US regional leadership**

**Cullinane ‘11**

[Scott Cullinane is a graduate student at the Institute of World Politics in Washington, D.C <http://www.ensec.org/index.php?option=com_content&view=article&id=319:america-falling-behind-the-strategic-dimensions-of-chinese-commercial-nuclear-energy&catid=118:content&Itemid=376> ETB]

Due to a confluence of events the United States has recently focused more attention on nuclear weapons policy than it has in previous years; however, the proliferation of commercial nuclear technology and its implications for America’s strategic position have been largely ignored. While the Unites States is currently a participant in the international commercial nuclear energy trade, **America’s** own **domestic construction of nuclear power plants has atrophied severely and the US risks losing its competitive edge in** the **nuclear energy** arena.¶ Simultaneously, the People’s Republic of **China** (PRC) **has made great strides in closing the nuclear** energy **development gap with America**. **Through a combination of importing technology, research from within China itself, and a disciplined policy approach the PRC is increasingly able to leverage the export of commercial nuclear power as part of its national strategy**. **Disturbingly, China does not share America’s commitment to stability, transparency, and responsibility when exporting nuclear technology**. This is a growing strategic weakness and risk for the United States**. To remain competitive and to be in a position to offset the PRC when required the American government should encourage** the **domestic** use of **nuclear power and spur** the forces of **tech**nological **innovation**.¶ History has recorded well American wartime nuclear developments which culminated in the July 1945 Trinity Test, but what happened near Arco, Idaho six years later has been overlooked. In 1951, scientists for the first time produced usable electricity from an experimental nuclear reactor. Once this barrier was conquered the atom was harnessed to generate electricity and permitted America to move into the field of commercial nuclear power. In the next five years alone the United States signed over 20 nuclear cooperation agreements with various countries. Not only did the US build dozens of power plants domestically during the 1960s and 1970s, the US Export-Import Bank also distributed $7.1 billion dollars in loans and guarantees for the international sale of 49 reactors. American built and designed reactors were exported around the world during those years. Even today, more than 60% of the world’s 440 operating reactors are based on technology developed in the United States. The growth of the US civilian nuclear power sector stagnated after the Three Mile Island incident in 1979 – the most serious accident in American civilian nuclear power history. Three Mile Island shook America’s confidence in nuclear power and provided the anti-nuclear lobby ample fuel to oppose the further construction of any nuclear power plants. In the following decade, 42 planned domestic nuclear power plants were cancelled, and in the 30 years since the Three Mile Island incident the American nuclear power industry has survived only through foreign sales and merging operations with companies in Asia and Europe. Westinghouse sold its nuclear division to Toshiba and General Electric joined with Hitachi. Even the highest levels of the American government came to cast nuclear power aside. President Bill Clinton bragged in his 1993 State of the Union Address that “we are eliminating programs that are no longer needed, such as nuclear power research and development.” ¶ **America’s slow pace of reactor construction over the past three decades has stymied innovation and caused the nuclear sector and its industrial base to shrivel**. While some aspects of America’s nuclear infrastructure still operate effectively, **many critical areas have atrophied.** For example, one capability that America has entirely lost is the means to cast ultra heavy forgings in the range of 350,000 – 600,000 pounds, which impacts the construction of containment vessels, turbine rotors, and steam generators. In contrast, Japan, China, and Russia all possess an ultra heavy forging capacity and South Korea and India plan to build forges in this range. Likewise, the dominance America enjoyed in uranium enrichment until the 1970s is gone. The current standard centrifuge method for uranium enrichment was not invented in America and today 40% of the enriched uranium US power plants use is processed overseas and imported. Another measure of how much the US nuclear industry has shrunk is evident in the number of companies certified to handle nuclear material. In the 1980s the United States had 400 nuclear suppliers and 900 holders of N-stamp certificates (N-stamps are the international nuclear rating certificates issued by the American Society of Mechanical Engineers). By 2008 that number had reduced itself to 80 suppliers and 200 N-stamp holders. A recent Government Accountability Office report, which examined data from between 1994 and 2009, found the US to have a declining share of the global commercial nuclear trade. However, during that same period over 60 reactors were built worldwide. Nuclear power plants are being built in the world increasingly by non-American companies.¶ The American nuclear industry entered the 1960s in a strong position, yet over the past 30 years other countries have closed the development gap with America. **The implications of this change go beyond economics or prestige to include national security. These changes would be less threatening if friendly allies were the ones moving forward with developing a nuclear export industry; however, the quick advancement of the PRC in nuclear energy changes the strategic calculus for America.**¶ The shifting strategic landscape¶ **While America’s nuclear industry has languished, current changes in the world’s strategic layout no longer allow America the option of maintaining the status quo without being surpassed.** The drive for research, development, and scientific progress that grew out of the Cold War propelled America forward, but those priorities have long since been downgraded by the US government. **The economic development of formerly impoverished countries means that the US cannot assume continued dominance by default**. **The rapidly industrializing PRC is seeking its own place among the major powers of the world and is vying for hegemony in Asia; nuclear power is an example of their larger efforts to marshal their scientific and economic forces as instruments of national power.**¶ The rise of China is a phrase that connotes images of a backwards country getting rich off of exporting cheap goods at great social and environmental costs. Yet, this understanding of the PRC has lead many in the United States to underestimate China’s capabilities. The Communist Party of China (**CPC) has undertaken a comprehensive long-term strategy to transition from a weak state that lags behind the West to a country that is a peer-competitor to the United States. Nuclear technology provides a clear example of this.** ¶ In 1978, General Secretary Deng Xiaoping began to move China out of the destructive Mao era with his policies of 'reform and opening.' As part of these changes during the 1980s, the CPC began a concerted and ongoing effort to modernize the PRC and acquire advanced technology including nuclear technology from abroad. This effort was named Program 863 and included both legal methods and espionage. By doing this, the PRC has managed to rapidly catch up to the West on some fronts. In order to eventually surpass the West in scientific development the PRC launched the follow-on Program 973 to build the foundations of basic scientific research within China to meet the nation’s major strategic needs. These steps have brought China to the cusp of the next stage of technological development, a stage known as “indigenous innovation.”¶ ¶ In 2006 the PRC published their science and technology plan out to 2020 and defined indigenous innovation as enhancing original innovation, integrated innovation, and re-innovation based on assimilation and absorption of imported technology in order improve national innovation capability. The Chinese seek to internalize and understand technological developments from around the world so that they can copy the equipment and use it as a point to build off in their own research. This is a step beyond merely copying and reverse engineering a piece of technology. The PRC sees this process of absorbing foreign technology coupled with indigenous innovation as a way of leapfrogging forward in development to gain the upper hand over the West. **The PRC’s official statement on energy policy lists nuclear power as one of their target fields. When viewed within this context, the full range of implications from China’s development of nuclear technology becomes evident**. **The PRC is** now **competing with the U**nited **St**ates **in the areas of innovation and high-technology, two fields that have driven American power since World War Two**. **China’s economic appeal** is no longer merely the fact that it has cheap labor, but **is expanding its economic power in a purposeful way that directly challenges America’s position in the world**.¶ ¶ **The CPC uses the market to their advantage to attract nuclear technology and intellectual capital to China**. The PRC has incentivized the process and encouraged new domestic nuclear power plant construction with the goal of having 20 nuclear power plants operational by 2020. The Chinese Ministry of Electrical Power has described PRC policy to reach this goal as encouraging joint investment between State Owned Corporations and foreign companies. 13 reactors are already operating in China, 25 more are under construction and even more reactors are in the planning stages. ¶ In line with this economic policy, China has bought nuclear reactors from Westinghouse and Areva and is cooperating with a Russian company to build nuclear power plants in Taiwan. By stipulating that Chinese companies and personnel be involved in the construction process, China is building up its own domestic capabilities and expects to become self-sufficient. **China’s** State Nuclear Power Technology Corporation has **partnered with Westinghouse to build a new and larger reactor** based on the existing Westinghouse AP 1000 reactor. **This will give the PRC a reactor design of its own to then export**. **If the CPC is able to combine their control over raw materials, growing technical know-how, and manufacturing base, China will not only be a powerful economy, but be able to leverage this power to service its foreign policy goals as well.**¶ Even though the PRC is still working to master third generation technology, their scientists are already working on what they think will be the nuclear reactor of the future. China is developing Fourth Generation Fast Neutron Reactors and wants to have one operational by 2030. Additionally, a Chinese nuclear development company has announced its intentions to build the “world’s first high-temperature, gas-cooled reactor” in Shandong province which offers to possibility of a reactor that is nearly meltdown proof. A design, which if proved successful, could potentially redefine the commercial nuclear energy trade.¶ The risk to America¶ **The international trade of nuclear material is hazardous in that every sale and transfer increases the chances for an accident or for willful misuse of the material. Nuclear commerce must be kept safe in order for the benefits of nuclear power generation to be realized. Yet, China has a record of sharing dangerous weapons and nuclear material with unfit countries**. **It is a risk for America to allow China to become a nuclear exporting country with a competitive technical and scientific edge. In order to limit Chinese influence and the relative attractiveness of what they can offer, America must ensure its continuing and substantive lead in reactor technology.**¶ ¶ The PRC’s record of exporting risky items is well documented. It is known that during the 1980s **the Chinese shared nuclear weapon designs with Pakistan and continues to proliferate WMD-related material.** According to the Office of the Director of National Intelligence to Congress, **China sells technologies and components in the Middle East and South Asia that are dual use and could support WMD and missile programs.** Jane’s Intelligence Review reported in 2006 that China,¶ Despite a 1997 promise to Washington to halt its nuclear technology sales to Iran, such assistance is likely to continue. In 2005, Iranian resistance groups accused China of selling Iran beryllium, which is useful for making nuclear triggers and maraging steel (twice as hard as stainless steel), which is critical for fabricating centrifuges needed to reprocess uranium into bomb-grade material. ¶ **China sells dangerous materials in order to secure its geopolitical objectives, regardless if those actions harm world stability. There is little reason to believe China will treat the sale of nuclear reactors any differently. Even if the PRC provides public assurances that it will behave differently in the future, the CPC has not been truthful for decades about its nuclear material and weapons sales and hence lacks credibility**. For example, in 1983 Chinese Vice Premier Li Peng said that China does not encourage or support nuclear proliferation. In fact, it was that same year that China contracted with Algeria, then a non-NPT [Non-Proliferation Treaty] state, to construct a large, unsafeguarded plutonium production reactor. In 1991 a Chinese Embassy official wrote in a letter to the The Washington Post that 'China has struck no nuclear deal with Iran.' In reality, China had provided Iran with a research reactor capable of producing plutonium and a calutron, a technology that can be used to enrich uranium to weapons-grade. It has been reported that even after United Nation sanctions were put on Iran, Chinese companies were discovered selling “high-quality carbon fiber” and “pressure gauges” to Iran for use in improving their centrifuges.¶ In 2004 the PRC joined the Nuclear Suppliers Groups (NSG), gaining international recognition of their growing power in the nuclear field. In spite of this opportunity for China to demonstrate its responsibility with nuclear energy, it has not fulfilled it NSG obligations. The PRC has kept the terms of its nuclear reactor sale to Pakistan secret and used a questionable legal technicality to justify forgoing obtaining a NSG waiver for the deal. Additionally, China chose to forgo incorporating new safety measures into the reactors in order to avoid possible complications.¶ A further consequence of China exporting reactors is that these countries may wish to control the fuel cycle which provides the uranium to power their new reactors. The spread of fuel cycle technology comes with two risks: enrichment and reprocessing. Uranium can be enriched to between 3% and 5% for reactor use, but the process can be modified to produce 90% enriched uranium which is weapons-grade. Even if a country only produces low enriched uranium they could easily begin enriching at a higher level if they so choose**. Every new country that nuclear technology or information is spread to exponentially increases the risk of material being stolen, given to a third party or being used as the launching point for a weapons program**. **China’s history of proliferation and willingness to engage economically with very unsavory governments seems likely to increase the risks involving nuclear material.**

#### U.S. leadership in Asia solves multiple scenarios for war

Goh 8

(Evelyn, Lecturer in International Relations in the Department of Politics and International Relations at the Univ of Oxford, International Relations of the Asia-Pacific, “Hierarchy and the role of the United States in the East Asian security order,” 2008 8(3):353-377, Oxford Journals Database)

This is the main structural dilemma: **as long as the U**nited **S**tates **does not give up its primary position in the Asian regional hierarchy**, China is very unlikely to act in a way that will provide comforting answers to the two questions. Yet**, the East Asian regional order has been and still is constituted by US hegemony**, and **to change that could be extremely disruptive and may lead to regional actors acting in highly destabilizing ways**. **Rapid Japanese remilitarization, armed conflict across the Taiwan Straits, Indian nuclear brinksmanship directed toward Pakistan, or a highly destabilized Korean peninsula are all illustrative of potential regional disruptions**. 5 Conclusion To construct a coherent account of East Asia’s evolving security order, I have suggested that the United States is the central force in constituting regional stability and order. **The major patterns of equilibrium and turbulence in the region since 1945 can be explained by the relative stability of the US position at the top of the regional hierarchy**, **with periods of greatest insecurity being correlated with greatest uncertainty over the American commitment to managing regional order**. Furthermore, relationships of hierarchical assurance and hierarchical deference explain the unusual character of regional order in the post-Cold War era. However, **the greatest contemporary challenge to East Asian order is the potential conflict between China and the United States over rank ordering in the regional hierarchy**, a contest made more potent because of the intertwining of regional and global security concerns. Ultimately, though, investigating such questions of positionality requires conceptual lenses that go beyond basic material factors because it entails social and normative questions. How can China be brought more into a leadership position, while being persuaded to buy into shared strategic interests and constrain its own in ways that its vision of regional and global security may eventually be reconciled with that of the United States and other regional players? How can Washington be persuaded that its central position in the hierarchy must be ultimately shared in ways yet to be determined? The future of the East Asian security order is tightly bound up with the durability of the United States’ global leadership and regional domination. **At the regional level, the main scenarios of disruption are an outright Chinese challenge to US leadership, or the defection of key US allies, particularly Japan**. Recent history suggests, and the preceding analysis has shown, that challenges to or defections from **US leadership will come at junctures where it appears that the US commitment to the region is in doubt**, which in turn destabilizes the hierarchical order. At the global level, American geopolitical over-extension will be the key cause of change. This is the one factor that Hierarchy and the role of the United States in the East Asian security order 373lead to both greater regional and global turbulence, if only by the attendant strategic uncertainly triggering off regional challenges or defections. However, it is notoriously difficult to gauge thresholds of over-extension. More positively, East Asia is a region that has adjusted to previous periods of uncertainty about US primacy. Arguably, the regional consensus over the United States as primary state in a system of benign hierarchy could accommodate a shifting of the strategic burden to US allies like Japan and Australia as a means of systemic preservation. **The alternatives that could surface as a result of not doing so would appear to be much worse.**

#### Asian wars go nuclear

Landy 2k

 National Security Expert @ Knight Ridder, 3/10 ¶ (Jonathan, Knight Ridder, lexis)

Few if any experts think China and Taiwan, North Korea and South Korea, or India and Pakistan are spoiling to fight. But **even a minor miscalculation** by any of them **could destabilize Asia,** jolt the global economy **and** even **start** a **nuclear war. India, Pakistan and** **China all have nuclear weapons, and North Korea** may have a few, **too. Asia lacks the** kinds of organizations, negotiations and diplomatic **relationships that helped keep** an uneasy **peace** for five decades **in Cold War Europe. “Nowhere else** on Earth **are the stakes as high and relationships so fragile,”** said Bates Gill, director of northeast Asian policy studies at the Brookings Institution, a Washington think tank. “We see the convergence of great power interest overlaid with lingering confrontations with no institutionalized security mechanism in place. There are elements for potential disaster.” In an effort to cool the region’s tempers, President Clinton, Defense Secretary William S. Cohen and National Security Adviser Samuel R. Berger all will hopscotch Asia’s capitals this month. For America, the stakes could hardly be higher. **There are 100,000 U.S. troops in Asia** committed to defending Taiwan, Japan and South Korea, and **the U**nited **St**ates **would instantly** **become embroiled** if Beijing moved against Taiwan or North Korea attacked South Korea. While Washington has no defense commitments to either **India or Pakistan**, a conflict between the two **could end the** global **taboo against using nuclear weapons** and demolish the already shaky international nonproliferation regime. In addition, globalization has made a stable Asia \_ with its massive markets, cheap labor, exports and resources \_ indispensable to the U.S. economy. Numerous U.S. firms and millions of American jobs depend on trade with Asia that totaled $600 billion last year, according to the Commerce Department.

#### China will risk military conflict by asserting heg in the South China Sea - US leadership is key to solve

Dillon ‘11

[Dana R. Dillon is the author of The China Challenge (2007) and a frequent commentator on Asian and national security issues; non-staff member at the Heritage foundation. “Countering Beijing in the South China Sea.” Policy Review #167, The Hoover Institution @ Stanford University. <http://www.hoover.org/publications/policy-review/article/79931> ETB]

The most dangerous source of instability in Asia is a rising China seeking to reassert itself, and the place China is most likely to risk a military conflict is the South China Sea. In the second decade of the 21st century, the seldom-calm waters of the South China Sea are frothing from a combination of competing naval exercises and superheated rhetoric. Many pundits, politicians, and admirals see the South China Sea as a place of future competition between powers.¶ Speculation about impending frictions started at the July 2010 asean Regional Forum (arf) when U.S. Secretary of State Hillary Clinton delivered an overdue statement on American interests in the South China Sea. Clinton averred that the United States has a national interest in freedom of navigation in the South China Sea; that the U.S. supported a collaborative process in resolving the territorial disputes there; and that the U.S. supports the 2002 asean-China declaration on the conduct of parties in the South China Sea.¶ Despite Clinton’s statement of support for China’s own agreements with the Association of Southeast Asian Nations, China’s Foreign Ministry responded negatively, claiming that the secretary’s statement was “virtually an attack on China.” China’s military stated that it was opposed to “internationalization” of the six-country dispute and commenced a new and unusually large naval exercise in South China Sea the very next week.¶ This gathering maritime confrontation is instigated by China’s assertions of sovereignty over the entire South China Sea and its stated intention to enforce that sovereignty. But the source of China’s hubris is its view of its historic mandate to rule all under heaven. Extending China’s borders a thousand miles across the South China Sea is only one policy manifestation of this vision of a new Chinese world order. Consistent with its Sinocentric ideology, Beijing believes its authority over its smaller neighbors should include determining their foreign policy. After Clinton challenged China’s claim to the entire South China Sea, China’s foreign minister reportedly glared at a Singaporean diplomat and pronounced, “China is a big country and other countries are small countries, and that’s just a fact.”1 More telling of China’s opinion of its position among nations, the following Monday China’s Foreign Ministry posted a statement that “China’s view represented the interests of ‘fellow Asians.’”¶ The competing territorial claims in the South China Sea are decades old, but today the Chinese government is full of a sense of accomplishment and the People’s Liberation Army is flush with the fastest growing military budget in the world. Clinton’s statement may have been inspired by earlier statements by Clinton’s Chinese counterpart, the state councilor responsible for foreign affairs, Dai Bingguo, directly to Clinton herself and repeated to several U.S. aides that the enforcement of China’s sovereignty over the South China Sea was a “core interest” on par with Taiwan and Tibet. While Dai Bingguo reportedly has desisted from using the term “core interest” to describe China’s maritime sovereignty, personalities in China’s military still do. In January 2011 the web site of the People’s Daily, the official organ of the Chinese Communist party, surveyed readers about whether the South China Sea is China’s “core interest”; 97 percent of nearly 4,300 respondents said yes.2¶ Short of a shooting war, protecting freedom of navigation in one of the globe’s busiest sea lanes requires an amicable resolution of the competing territorial claims. Starting a process to resolve or neutralize the problem will require American leadership and resolve. Firm diplomacy backed by convincing naval power and patient leadership can strike a balance in the region that protects freedom of navigation, the integrity of international law, and the independence and sovereignty of Southeast Asia’s nations.¶ The worst solution to the South China Sea dispute from the U.S. point of view would be for China’s asean neighbors simply to acquiesce to Beijing’s position and for the entire South China Sea to become the sovereign territory of the People’s Republic of China (prc). The Beijing position is also the worst solution for the asean and every other trading nation on the planet. But an almost as bad solution is for the U.S. to become involved in a bilateral confrontation with China without the firm endorsement and commitment to American actions by the other littoral claimants and by America’s Asia-Pacific allies. Without the support of regional alliances, the U.S. would be entangled in a campaign at the far end of its logistical tail but deep inside the reach of a large and rising power.

#### High tensions make compromise unlikely - US leadership is key to forcing multilateral agreement

Clayton 8/24

[Marquis Clayton is a Research Assistant at the East-West Center in Washington. “Uncomfortable Truths: Breaking the Impasse in the South China Sea.” Asia Pacific Bulletin #178. ETB]

¶ The final uncomfortable truth is that historical animosities and increasingly emotional¶ resource nationalism are likely to make the situation worse, possibly much worse, before¶ it gets better. The primary reason is that political leaders in the claimant countries have¶ little incentive or capability to undertake the types of compromise which would be¶ required to resolve the disputes. In the Philippines, President Benigno Aquino has¶ staked out a much tougher stance on South China Sea issues than his predecessor’s¶ policies which he saw as weak and encouraging Chinese aggression. In the aftermath of¶ the incidents last year at Reed Bank and this year at both Scarborough and Half Moon¶ Shoals, he is unlikely to begin promoting a more conciliatory approach.¶ In Vietnam, public protests and opposition to concessions on territorial and sovereignty¶ disputes with China leave its leaders very little room to maneuver. Considering the¶ history of conflict between the two nations and recent disputes over arrests and¶ detentions of fishermen as well as drilling rights in contested areas, it is unlikely that¶ such public sentiment will be easy to reduce.¶ In China, the national leadership will be undergoing a major change for the first time in¶ a decade. The new incoming party secretary and president, Xi Jinping, will seek to¶ consolidate his power and is unlikely to make one of his first foreign policy initiatives a¶ weakening of China’s claims of sovereignty in the South China Sea, a move which¶ would face stiff opposition from the military and public. In short, without substantial¶ outside pressure to do so, claimant countries are not likely to soften their stances or¶ undertake major initiatives to improve the situation.¶ The United States is the only country with the ability to break this impasse. It is the only¶ party with the diplomatic, economic and military influence in the region to alter the¶ status quo in a positive manner as ASEAN has proven incapable of doing so, while¶ China has shown itself unwilling to do so. This means the United States must go even¶ further than it already has in laying out its interests in the future regional order and¶ guiding the various claimants through facing these uncomfortable truths and modifying¶ their current approaches to resolving the disputes. Other specific measures will include¶ increasing efforts to improve the capabilities of the Filipino and Vietnamese armed¶ forces to patrol and monitor their maritime peripheries.

#### Territorial disputes snowball - causes nuclear conflict

Chakraborty 10

(Tuhin Subhro Chakraborty, Research Associate at Rajiv Gandhi Institute for Contemporary Studies (RGICS), his primary area of work is centered on East Asia and International Relations. His recent work includes finding an alternative to the existing security dilemma in East Asia and the Pacific and Geo Political implications of the ‘Rise of China’. Prior to joining RGICS, he was associated with the Centre for Strategic Studies and Simulation, United Service Institution of India (USI) where he examined the role of India in securing Asia Pacific. He has coordinated conferences and workshops on United Nation Peacekeeping Visions and on China’s Quest for Global Dominance. He has written commentaries on issues relating to ASEAN, Asia Pacific Security Dilemma and US China relations. He also contributed in carrying out simulation exercise on the ‘Afghanistan Scenario’ for the Foreign Service Institute (FSI). Tuhin interned at the Indian Council of World Affairs (ICWA), Sapru House, wherein he worked on the Rise of People’s Liberation Army (PLA) military budget and its impact on India. He graduated from St. Stephen’s College, Delhi and thereafter he undertook his masters in East Asian Studies from University of Delhi. His areas of interest include China, India-Japan bilateral relations, ASEAN, Asia Pacific security dynamics and Nuclear Issues, The United States Service Institution of India, 2010, “The Initiation & Outlook of ASEAN Defence Ministers Meeting (ADMM) Plus Eight”, <http://www.usiofindia.org/Article/?pub=Strategic%20Perspective&pubno=20&ano=739>)

The first ASEAN Defence Ministers Meeting Plus Eight (China, India, Japan, South Korea, Australia, New Zealand, Russia and the USA) was held on the 12th of October. When this frame work of ADMM Plus Eight came into news for the first time it was seen as a development which could be the initiating step to a much needed security architecture in the Asia Pacific. Asia Pacific is fast emerging as the economic center of the world, consequently securing of vulnerable economic assets has becomes mandatory. The source of threat to economic assets is basically unconventional in nature like natural disasters, terrorism and maritime piracy. This coupled with the conventional security threats and flashpoints based on territorial disputes and political differences are very much a part of the region posing a major security challenge.¶ As mentioned ADMM Plus Eight can be seen as the first initiative on such a large scale where the security concerns of the region can be discussed and areas of cooperation can be explored to keep the threats at bay. The defence ministers of the ten ASEAN nations and the eight extra regional countries (Plus Eight) during the meeting have committed to cooperation and dialogue to counter insecurity in the region. One of the major reasons for initiation of such a framework has been the new face of threat which is non-conventional and transnational which makes it very difficult for an actor to deal with it in isolation. Threats related to violent extremism, maritime security, vulnerability of SLOCs, transnational crimes have a direct and indirect bearing on the path of economic growth. Apart from this the existence of territorial disputes especially on the maritime front plus the issues related to political differences, rise of China and dispute on the Korean Peninsula has aggravated the security dilemma in the region giving rise to areas of potential conflict. This can be seen as a more of a conventional threat to the region.¶ The question here is that how far this ADMM Plus Eight can go to address the conventional security threats or is it an initiative which would be confined to meetings and passing resolution and playing second fiddle to the ASEAN summit. It is very important to realize that when one is talking about effective security architecture for the Asia Pacific one has to talk in terms of addressing the conventional issues like the territorial and political disputes. These issues serve as bigger flashpoint which can snowball into a major conflict which has the possibility of turning into a nuclear conflict.

#### Risk of conflict is high - miscalc triggers escalation and US gets drawn in

Glaser ‘12

[Bonnie S. Glaser is a senior fellow with the Freeman Chair in China Studies and a senior associate with the Pacific Forum, Center for Strategic and International Studies. Council on Foreign Relations. <http://www.cfr.org/east-asia/armed-clash-south-china-sea/p27883> ETB]

The risk of conflict in the South China Sea is significant. China, Taiwan, Vietnam, Malaysia, Brunei, and the Philippines have competing territorial and jurisdictional claims, particularly over rights to exploit the region's possibly extensive reserves of oil and gas. Freedom of navigation in the region is also a contentious issue, especially between the United States and China over the right of U.S. military vessels to operate in China's two-hundred-mile exclusive economic zone (EEZ). These tensions are shaping—and being shaped by—rising apprehensions about the growth of China's military power and its regional intentions. China has embarked on a substantial modernization of its maritime paramilitary forces as well as naval capabilities to enforce its sovereignty and jurisdiction claims by force if necessary. At the same time, it is developing capabilities that would put U.S. forces in the region at risk in a conflict, thus potentially denying access to the U.S. Navy in the western Pacific.¶ Given the growing importance of the U.S.-China relationship, and the Asia-Pacific region more generally, to the global economy, the United States has a major interest in preventing any one of the various disputes in the South China Sea from escalating militarily.¶ The Contingencies¶ Of the many conceivable contingencies involving an armed clash in the South China Sea, three especially threaten U.S. interests and could potentially prompt the United States to use force.¶ The most likely and dangerous contingency is a clash stemming from U.S. military operations within China's EEZ that provokes an armed Chinese response. The United States holds that nothing in the United Nations Convention on the Law of the Sea (UNCLOS) or state practice negates the right of military forces of all nations to conduct military activities in EEZs without coastal state notice or consent. China insists that reconnaissance activities undertaken without prior notification and without permission of the coastal state violate Chinese domestic law and international law. China routinely intercepts U.S. reconnaissance flights conducted in its EEZ and periodically does so in aggressive ways that increase the risk of an accident similar to the April 2001 collision of a U.S. EP-3 reconnaissance plane and a Chinese F-8 fighter jet near Hainan Island. A comparable maritime incident could be triggered by Chinese vessels harassing a U.S. Navy surveillance ship operating in its EEZ, such as occurred in the 2009 incidents involving the USNS Impeccable and the USNS Victorious. The large growth of Chinese submarines has also increased the danger of an incident, such as when a Chinese submarine collided with a U.S. destroyer's towed sonar array in June 2009. Since neither U.S. reconnaissance aircraft nor ocean surveillance vessels are armed, the United States might respond to dangerous behavior by Chinese planes or ships by dispatching armed escorts. A miscalculation or misunderstanding could then result in a deadly exchange of fire, leading to further military escalation and precipitating a major political crisis. Rising U.S.-China mistrust and intensifying bilateral strategic competition would likely make managing such a crisis more difficult.¶ A second contingency involves conflict between China and the Philippines over natural gas deposits, especially in the disputed area of Reed Bank, located eighty nautical miles from Palawan. Oil survey ships operating in Reed Bank under contract have increasingly been harassed by Chinese vessels. Reportedly, the United Kingdom-based Forum Energy plans to start drilling for gas in Reed Bank this year, which could provoke an aggressive Chinese response. Forum Energy is only one of fifteen exploration contracts that Manila intends to offer over the next few years for offshore exploration near Palawan Island. Reed Bank is a red line for the Philippines, so this contingency could quickly escalate to violence if China intervened to halt the drilling.¶ The United States could be drawn into a China-Philippines conflict because of its 1951 Mutual Defense Treaty with the Philippines. The treaty states, "Each Party recognizes that an armed attack in the Pacific Area on either of the Parties would be dangerous to its own peace and safety and declares that it would act to meet the common dangers in accordance with its constitutional processes." American officials insist that Washington does not take sides in the territorial dispute in the South China Sea and refuse to comment on how the United States might respond to Chinese aggression in contested waters. Nevertheless, an apparent gap exists between American views of U.S. obligations and Manila's expectations. In mid-June 2011, a Filipino presidential spokesperson stated that in the event of armed conflict with China, Manila expected the United States would come to its aid. Statements by senior U.S. officials may have inadvertently led Manila to conclude that the United States would provide military assistance if China attacked Filipino forces in the disputed Spratly Islands.¶ With improving political and military ties between Manila and Washington, including a pending agreement to expand U.S. access to Filipino ports and airfields to refuel and service its warships and planes, the United States would have a great deal at stake in a China-Philippines contingency. Failure to respond would not only set back U.S. relations with the Philippines but would also potentially undermine U.S. credibility in the region with its allies and partners more broadly. A U.S. decision to dispatch naval ships to the area, however, would risk a U.S.-China naval confrontation.¶ Disputes between China and Vietnam over seismic surveys or drilling for oil and gas could also trigger an armed clash for a third contingency. China has harassed PetroVietnam oil survey ships in the past that were searching for oil and gas deposits in Vietnam's EEZ. In 2011, Hanoi accused China of deliberately severing the cables of an oil and gas survey vessel in two separate instances. Although the Vietnamese did not respond with force, they did not back down and Hanoi pledged to continue its efforts to exploit new fields despite warnings from Beijing. Budding U.S.-Vietnam relations could embolden Hanoi to be more confrontational with China on the South China Sea issue.¶ The United States could be drawn into a conflict between China and Vietnam, though that is less likely than a clash between China and the Philippines. In a scenario of Chinese provocation, the United States might opt to dispatch naval vessels to the area to signal its interest in regional peace and stability. Vietnam, and possibly other nations, could also request U.S. assistance in such circumstances. Should the United States become involved, subsequent actions by China or a miscalculation among the forces present could result in exchange of fire. In another possible scenario, an attack by China on vessels or rigs operated by an American company exploring or drilling for hydrocarbons could quickly involve the United States, especially if American lives were endangered or lost. ExxonMobil has plans to conduct exploratory drilling off Vietnam, making this an existential danger. In the short term, however, the likelihood of this third contingency occurring is relatively low given the recent thaw in Sino-Vietnamese relations. In October 2011, China and Vietnam signed an agreement outlining principles for resolving maritime issues. The effectiveness of this agreement remains to be seen, but for now tensions appear to be defused.¶ Warning Indicators¶ Strategic warning signals that indicate heightened risk of conflict include political decisions and statements by senior officials, official and unofficial media reports, and logistical changes and equipment modifications. In the contingencies described above, strategic warning indicators could include heightened rhetoric from all or some disputants regarding their territorial and strategic interests. For example, China may explicitly refer to the South China Sea as a core interest; in 2010 Beijing hinted this was the case but subsequently backed away from the assertion. Beijing might also warn that it cannot "stand idly by" as countries nibble away at Chinese territory, a formulation that in the past has often signaled willingness to use force. Commentaries and editorials in authoritative media outlets expressing China's bottom line and issuing ultimatums could also be a warning indicator. Tough language could also be used by senior People's Liberation Army (PLA) officers in meetings with their American counterparts. An increase in nationalistic rhetoric in nonauthoritative media and in Chinese blogs, even if not representing official Chinese policy, would nevertheless signal pressure on the Chinese leadership to defend Chinese interests. Similar warning indicators should be tracked in Vietnam and the Philippines that might signal a hardening of those countries' positions.¶ Tactical warning signals that indicate heightened risk of a potential clash in a specific time and place include commercial notices and preparations, diplomatic and/or military statements warning another claimant to cease provocative activities or suffer the consequences, military exercises designed to intimidate another claimant, and ship movements to disputed areas. As for an impending incident regarding U.S. surveillance activities, statements and unusual preparations by the PLA might suggest a greater willingness to employ more aggressive means to intercept U.S. ships and aircraft.

#### US-China war goes nuclear

Hunkovic 9

Lee J. Hunkovic -- professor at American Military University, 09, [“The Chinese-Taiwanese Conflict Possible Futures of a Confrontation between China, Taiwan and the United States of America”, American Military University, p.54]

A war between China, Taiwan and the United States has the potential to escalate into a nuclear conflict and a third world war, therefore, many countries other than the primary actors could be affected by such a conflict, including Japan, both Koreas, Russia, Australia, India and Great Britain, if they were drawn into the war, as well as all other countries in the world that participate in the global economy, in which the United States and China are the two most dominant members. If China were able to successfully annex Taiwan, the possibility exists that they could then plan to attack Japan and begin a policy of aggressive expansionism in East and Southeast Asia, as well as the Pacific and even into India, which could in turn create an international standoff and deployment of military forces to contain the threat. In any case, if China and the United States engage in a full-scale conflict, there are few countries in the world that will not be economically and/or militarily affected by it. However, China, Taiwan and United States are the primary actors in this scenario, whose actions will determine its eventual outcome, therefore, other countries will not be considered in this study.

#### SMR’s are vital to stop Chinese energy leadership

Palley ‘09

(author of many books and articles, including The Answer: Why Only Mini Nuclear Power Plants Can Save the World. The London School of Economics 1949-52 and The School for Social Research 1945-49 (Reese, U.S. cedes the lead on nuclear energy, http://articles.philly.com/2012-01-20/news/30647588\_1\_nuclear-reactors-nuclear-energy-nuclear-waste)

Recent news that Gates has been meeting with the Chinese about traveling wave technology is particularly ominous. This could help put China at the forefront of a new industry and leave the United States, in nuclear terms, a banana republic.¶ The Chinese lack the contentious, partisan political structure that prevents some alternative technologies from growing in the United States. One is reminded of Mao's injunction to "let a hundred flowers blossom," which is still the Chinese government's attitude toward technological innovation. With this approach, and no need to contend with uninformed public opinion or political bickering, China threatens to rapidly outpace America in developing tomorrow's means of energy production.¶ In the 1980s, I went to China to help build factories for the manufacture of fiberglass luxury yachts. The Chinese started from absolute scratch, never having even seen a fiberglass yacht, yet in relatively short order, they were exporting million-dollar boats. If they start applying this kind of innovative energy to the construction and export of small, modular nuclear reactors, the world will cease to look to America for energy solutions. The Chinese, standing on the shoulders of half a century of American ingenuity, will inherit the leadership of the world's most vital industry.

#### Green leadership solves extinction

Klarevas ‘09

(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 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 - and the best approach for achieving this is to promote a national strategy of greengemony.

### Solvency

#### DoD acquisition of SMR’s ensures rapid military adoption, commercialization, and U.S. leadership

Andres and Breetz 11

Richard Andres, Professor of National Security Strategy at the National War College and a Senior Fellow and Energy and Environmental Security and Policy Chair in the Center for Strategic Research, Institute for National Strategic Studies, at the National Defense University, and Hanna Breetz, doctoral candidate in the Department of Political Science at The Massachusetts Institute of Technology, Small Nuclear Reactorsfor Military Installations:Capabilities, Costs, andTechnological Implications, [www.ndu.edu/press/lib/pdf/StrForum/SF-262.pdf](http://www.ndu.edu/press/lib/pdf/StrForum/SF-262.pdf)

Thus far, this paper has reviewed two of DOD’s most pressing energy vulnerabilities—grid insecurity and fuel convoys—and explored how they could be addressed by small reactors. We acknowledge that there are many uncertainties and risks associated with these reactors. On the other hand, failing to pursue these technologies raises its own set of risks for DOD, which we review in this section: first, small reactors may fail to be commercialized in the United States; second, the designs that get locked in by the private market may not be optimal for DOD’s needs; and third, expertise on small reactors may become concentrated in foreign countries. By taking an early “first mover” role in the small reactor market, DOD could mitigate these risks and secure the long-term availability and appropriateness of these technologies for U.S. military applications. The “Valley of Death.” Given the promise that small reactors hold for military installations and mobility, DOD has a compelling interest in ensuring that they make the leap from paper to production. However, if DOD does not provide an initial demonstration and market, there is a chance that the U.S. small reactor industry may never get off the ground. The leap from the laboratory to the marketplace is so difficult to bridge that it is widely referred to as the “Valley of Death.” Many promising technologies are never commercialized due to a variety of market failures— including technical and financial uncertainties, information asymmetries, capital market imperfections, transaction costs, and environmental and security externalities— that impede financing and early adoption and can lock innovative technologies out of the marketplace. 28 In such cases, the Government can help a worthy technology to bridge the Valley of Death by accepting the first mover costs and demonstrating the technology’s scientific and economic viability.29 [FOOTNOTE 29: There are numerous actions that the Federal Government could take, such as conducting or funding research and development, stimulating private investment, demonstrating technology, mandating adoption, and guaranteeing markets. Military procurement is thus only one option, but it has often played a decisive role in technology development and is likely to be the catalyst for the U.S. small reactor industry. See Vernon W. Ruttan, Is War Necessary for Economic Growth? (New York: Oxford University Press, 2006); Kira R. Fabrizio and David C. Mowery, “The Federal Role in Financing Major Inventions: Information Technology during the Postwar Period,” in Financing Innovation in the United States, 1870 to the Present, ed. Naomi R. Lamoreaux and Kenneth L. Sokoloff (Cambridge, MA: The MIT Press, 2007), 283–316.] Historically, nuclear power has been “the most clear-cut example . . . of an important general-purpose technology that in the absence of military and defense related procurement would not have been developed at all.”30 Government involvement is likely to be crucial for innovative, next-generation nuclear technology as well. Despite the widespread revival of interest in nuclear energy, Daniel Ingersoll has argued that radically innovative designs face an uphill battle, as “the high capital cost of nuclear plants and the painful lessons learned during the first nuclear era have created a prevailing fear of first-of-a-kind designs.”31 In addition, Massachusetts Institute of Technology reports on the Future of Nuclear Power called for the Government to provide modest “first mover” assistance to the private sector due to several barriers that have hindered the nuclear renaissance, such as securing high up-front costs of site-banking, gaining NRC certification for new technologies, and demonstrating technical viability.32 It is possible, of course, that small reactors will achieve commercialization without DOD assistance. As discussed above, they have garnered increasing attention in the energy community. Several analysts have even argued that small reactors could play a key role in the second nuclear era, given that they may be the only reactors within the means of many U.S. utilities and developing countries.33 However, given the tremendous regulatory hurdles and technical and financial uncertainties, it appears far from certain that the U.S. small reactor industry will take off. If DOD wants to ensure that small reactors are available in the future, then it should pursue a leadership role now. Technological Lock-in. A second risk is that if small reactors do reach the market without DOD assistance, the designs that succeed may not be optimal for DOD’s applications. Due to a variety of positive feedback and increasing returns to adoption (including demonstration effects, technological interdependence, network and learning effects, and economies of scale), the designs that are initially developed can become “locked in.”34 Competing designs—even if they are superior in some respects or better for certain market segments— can face barriers to entry that lock them out of the market. If DOD wants to ensure that its preferred designs are not locked out, then it should take a first mover role on small reactors. It is far too early to gauge whether the private market and DOD have aligned interests in reactor designs. On one hand, Matthew Bunn and Martin Malin argue that what the world needs is cheaper, safer, more secure, and more proliferation-resistant nuclear reactors; presumably, many of the same broad qualities would be favored by DOD.35 There are many varied market niches that could be filled by small reactors, because there are many different applications and settings in which they can be used, and it is quite possible that some of those niches will be compatible with DOD’s interests.36 On the other hand, DOD may have specific needs (transportability, for instance) that would not be a high priority for any other market segment. Moreover, while DOD has unique technical and organizational capabilities that could enable it to pursue more radically innovative reactor lines, DOE has indicated that it will focus its initial small reactor deployment efforts on LWR designs.37 If DOD wants to ensure that its preferred reactors are developed and available in the future, it should take a leadership role now. Taking a first mover role does not necessarily mean that DOD would be “picking a winner” among small reactors, as the market will probably pursue multiple types of small reactors. Nevertheless, DOD leadership would likely have a profound effect on the industry’s timeline and trajectory. Domestic Nuclear Expertise. From the perspective of larger national security issues, if DOD does not catalyze the small reactor industry, there is a risk that expertise in small reactors could become dominated by foreign companies. A 2008 Defense Intelligence Agency report warned that the United States will become totally dependent on foreign governments for future commercial nuclear power unless the military acts as the prime mover to reinvigorate this critical energy technology with small, distributed power reactors.38 Several of the most prominent small reactor concepts rely on technologies perfected at Federally funded laboratories and research programs, including the Hyperion Power Module (Los Alamos National Laboratory), NuScale (DOE-sponsored research at Oregon State University), IRIS (initiated as a DOE-sponsored project), Small and Transportable Reactor (Lawrence Livermore National Laboratory), and Small, Sealed, Transportable, Autonomous Reactor (developed by a team including the Argonne, Lawrence Livermore, and Los Alamos National Laboratories). However, there are scores of competing designs under development from over a dozen countries. If DOD does not act early to support the U.S. small reactor industry, there is a chance that the industry could be dominated by foreign companies. Along with other negative consequences, the decline of the U.S. nuclear industry decreases the NRC’s influence on the technology that supplies the world’s rapidly expanding demand for nuclear energy. Unless U.S. companies begin to retake global market share, in coming decades France, China, South Korea, and Russia will dictate standards on nuclear reactor reliability, performance, and proliferation resistance.

#### Military procurement solves commercial use and avoids regulations

Andres and Loudermilk 10

(Richard B. Andres, Professor of ¶ national Security Strategy at the ¶ national War College and a Senior fellow and energy and environmental ¶ Security and Policy Chair in the Center ¶ for Strategic research, institute for national Strategic Studies, at the national Defense University, Micah J, Research Associate for the Energy & Environmental Security Policy program with the Institute for National Strategic Studies at National Defense University, “Small Reactors and the Military’s Role in Securing America’s Nuclear IndustryPosted” <http://robertmayer.wordpress.com/2010/08/28/small-reactors-and-the-militarys-role-in-securing-americas-nuclear-industryposted/>, SEH)

Unlike private industry, **the military does not face the same regulatory and congressional hurdles to constructing reactors and would have an easier time in adopting them for use**. **By integrating small nuclear reactors as power sources for domestic U.S. military bases, three potential energy dilemmas are solved at the same time**. First, by incorporating small reactors at its bases, **the military addresses its own energy security quandary**. **The military has recently sought to “island” its bases in the U.S. -protecting them from grid outages**, be they accidental or intentional. **The Department of Defense has promoted this endeavor through lowering energy consumption on bases and searching for renewable power alternatives, but these measures alone will prove insufficient**. **Small reactors provide sufficient energy output to power military installations** and in some cases surrounding civilian population centers.¶ **Secondly, as the reactors become integrated on military facilities, the stigma on the nuclear power industry will ease and inroads will be created for the adoption of small-scale reactors as a viable source of energy. Private industry and the public will see that nuclear reactors can indeed be utilized safely and effectively, resulting in a renewed push toward the expansion of nuclear power**. Although many of the same hurdles will still be in place, **a shift in public opinion and a stronger effort by utilities, coupled with the demonstrated success of small reactors on military bases, could prove the catalysts necessary for the federal government and the NRC to take more aggressive action**.¶ Finally, while new reactors are not likely in the near future**, the military’s actions will preserve, for a while longer, the badly ailing domestic nuclear energy industry. Nuclear power is here to stay around the globe, and the United States has an opportunity to take a leading role in supplying the world’s nuclear energy and reactor technology.** With the U.S. nuclear industry dormant for three decades, much of the attention, technology, and talent have concentrated overseas in countries with a strong interest in nuclear technology. **Without the United States as a player in the nuclear energy market, it has little say over safety regulations of reactors or the potential risks of proliferation from the expansion of nuclear energy. If the current trend continues, the U.S. will reach a point where it is forced to import nuclear technology and reactors from other countries. Action by the military to install reactors on domestic bases will both guarantee the survival of the American nuclear industry in the short term, and work to solidify support for it in the long run.**¶ Ultimately**, between small-scale nuclear reactors and the U.S. military, the capability exists to revitalize America’s sleeping nuclear industry and promoting energy security and clean energy production**. The reactors offer the ability to power domestic military bases, small towns, and other remote locations detached from the energy grid. Furthermore, reactor sites can house multiple units, allowing for greater energy production – rivaling even large reactors. **Small reactors offer numerous benefits to the United States and a path initiated by the military presents a realistic route by which their adoption can be achieved.**

#### SMRs are cost-effective, safe, and can be quickly deployed

Szondy 12

David, freelance writer based in Monroe, Washington. An award-winning playwright, he has contributed to Charged and iQ magazine and is the author of the website Tales of Future Past, February 16, "Feature: Small modular nuclear reactors - the future of energy?", [www.gizmag.com/small-modular-nuclear-reactors/20860/](http://www.gizmag.com/small-modular-nuclear-reactors/20860/)

One way of getting around many of these problems is through the development of small modular reactors (SMR). These are reactors capable of generating about 300 megawatts of power or less, which is enough to run 45,000 US homes. Though small, SMRs are proper reactors. They are quite different from the radio-thermal generators (RTG) used in spacecraft and remote lighthouses in Siberia. Nuclear reactors such as SMRs use controlled nuclear fission to generate power while RTGs use natural radioactive decay to power a relatively simple thermoelectric generator that can only produce, at most, about two kilowatts.¶ In terms of power, RTGs are the equivalent of batteries while small nuclear reactors are only "small" when compared to conventional reactors. They are hardly the sort that you would keep in the garage. In reality, SMR power plants would cover the area of a small shopping mall. Still, such an installation is not very large as power plants go and a reactor that only produces 300 megawatts may not seem worth the investment, but the US Department of Energy is offering US$452 million in matching grants to develop SMRs and private investors like the Bill Gates Foundation and the company of Babcock and Wilcox are putting up money for their own modular reactor projects.¶ The 60-year old breakthrough¶ One reason for government and private industry to take an interest in SMRs is that they've been successfully employed for much longer than most people realize. In fact, hundreds have been steaming around the world inside the hulls of nuclear submarines and other warships for sixty years. They've also been used in merchant ships, icebreakers and as research and medical isotope reactors at universities. There was even one installed in the Antarctic at McMurdo Station from 1962 to 1972. Now they're being considered for domestic use.¶ The case for SMRs¶ SMRs have a number of advantages over conventional reactors. For one thing, SMRs are cheaper to construct and run. This makes them very attractive to poorer, energy-starved countries; small, growing communities that don't require a full-scale plant; and remote locations such as mines or desalination plants. Part of the reason for this is simply that the reactors are smaller. Another is that, not needing to be custom designed in each case, the reactors can be standardized and some types built in factories that are able to employ economies of scale. The factory-built aspect is also important because a factory is more efficient than on-site construction by as much as eight to one in terms of building time. Factory construction also allows SMRs to be built, delivered to the site, and then returned to the factory for dismantling at the end of their service lives - eliminating a major problem with old conventional reactors, i.e. how to dispose of them.¶ SMRs also enjoy a good deal of design flexibility. Conventional reactors are usually cooled by water - a great deal of water - which means that the reactors need to be situated near rivers or coastlines. SMRs, on the other hand, can be cooled by air, gas, low-melting point metals or salt. This means that SMRs can be placed in remote, inland areas where it isn't possible to site conventional reactors.¶ Safety¶ This cooling system is often passive. In other words, it relies more on the natural circulation of the cooling medium within the reactor's containment flask than on pumps. This passive cooling is one of the ways that SMRs can improve safety. Because modular reactors are smaller than conventional ones, they contain less fuel. This means that there's less of a mass to be affected if an accident occurs. If one does happen, there's less radioactive material that can be released into the environment and makes it easier to design emergency systems. Since they are smaller and use less fuel, they are easier to cool effectively, which greatly reduces the likelihood of a catastrophic accident or meltdown in the first place.¶ This also means that accidents proceed much slower in modular reactors than in conventional ones. Where the latter need accident responses in a matter of hours or minutes, SMRs can be responded to in hours or days, which reduces the chances of an accident resulting in major damage to the reactor elements.¶ The SMR designs that reject water cooling in favor of gas, metal or salt have their own safety advantages. Unlike water-cooled reactors, these media operate at a lower pressure. One of the hazards of water cooling is that a cracked pipe or a damaged seal can blow radioactive gases out like anti-freeze out of an overheated car radiator. With low-pressure media, there's less force to push gases out and there's less stress placed on the containment vessel. It also eliminates one of the frightening episodes of the Fukushima accident where the water in the vessel broke down into hydrogen and oxygen and then exploded.¶ Another advantage of modular design is that some SMRs are small enough to be installed below ground. That is cheaper, faster to construct and less invasive than building a reinforced concrete containment dome. There is also the point that putting a reactor in the ground makes it less vulnerable to earthquakes. Underground installations make modular reactors easier to secure and install in a much smaller footprint. This makes SMRs particularly attractive to military customers who need to build power plants for bases quickly. Underground installation also enhances security with fewer sophisticated systems needed, which also helps bring down costs.¶ SMRs can help with proliferation, nuclear waste and fuel supply issues because, while some modular reactors are based on conventional pressurized water reactors and burn enhanced uranium, others use less conventional fuels. Some, for example, can generate power from what is now regarded as "waste", burning depleted uranium and plutonium left over from conventional reactors. Depleted uranium is basically U-238 from which the fissible U-235 has been consumed. It's also much more abundant in nature than U-235, which has the potential of providing the world with energy for thousands of years. Other reactor designs don't even use uranium. Instead, they use thorium. This fuel is also incredibly abundant, is easy to process for use as fuel and has the added bonus of being utterly useless for making weapons, so it can provide power even to areas where security concerns have been raised.¶ But there's still the sticking point that modular reactors are, by definition, small. That may be fine for a submarine or the South Pole, but what about places that need more? Is the alternative conventional nuclear plants? It turns out that the answer is no. Modular reactors don't need to be used singly. They can be set up in batteries of five or six or even more, providing as much power as an area needs. And if one unit needs to be taken off line for repairs or even replacement, it needn't interfere with the operation of the others.

#### We have the personnel

ITA 11

(International Trade Administration, “The Commercial Outlook for U.S. Small Modular Nuclear Reactors” Manufacturing and Services Competitiveness Report, February 2011, US Department of Commerce)

A serious obstacle to the resurgence of traditional nuclear power in the United States is the eroded domestic manufacturing capacity for the major nuclear components. A robust program of building SMRs, however, could make use of existing domestic capacity that is already capable of completely constructing most proposed SMR designs. SMRs would not require the ultra-heavy forgings that currently can only be made overseas. U.S. suppliers say that firms could retool using existing capabilities and resources and could source most of the components of SMRs here in the United States. This ability could mean tremendous new commercial opportunities for U.S. firms and workers.¶ A substantial SMR deployment program in the United States could result in the creation of many new jobs in manufacturing, engineering, transportation, construction (for site preparation and installation) and craft labor, professional services, and ongoing plant operations. As SMR manufacturers prove their designs in the domestic market, they will likely consider export opportunities. The modular nature of SMRs and their relative portability means that locating export-oriented SMR manufacturing and assembly could make sense for U.S. companies, as opposed to the localiza-tion that is typically necessary for building larger reactors

#### DOD has the expertise

Cohen 12

Armond Cohen 12, Executive Director of the Clean Air Task Force, “DoD: A Model for Energy Innovation?”, May 29, <http://www.catf.us/blogs/ahead/2012/05/29/dod-a-model-for-energy-innovation/>

Unlike most other agencies, including the Energy Department, the Pentagon is the ultimate customer for the new technology it helps create, spending some $200 billion each year on R&D and procurement. The implications of DoD’s role as customer have not been widely appreciated, as: · DoD, uniquely in government, supports multi-year, billion-dollar “end to end” innovation efforts that produce technology that is continuously tested, deployed and refined on bases and in the field, providing real world feedback that leads to increases in performance and reductions in cost. By contrast, most of the federal government’s civilian energy innovation efforts involve research loosely connected at best with the few commercialization efforts that it supports. · DoD and its contractors know how to bring together multiple innovations to achieve system-level advances leading to big performance gains (examples range from nuclear submarines to unmanned aircraft to large-scale information systems). This systems approach is precisely what is needed to advance clean energy technologies. · Relatively stable, multi-year funding allows the Pentagon to pursue “long cycle” innovation that is necessary for large, capital- intensive technologies and supports a highly capable contractor base that can respond to changing national security demands. · The Pentagon’s scope and budget has allowed it to experiment with new and creative innovation tools such as the well-known Defense Advanced Projects Research Agency, which has produced extraordinary technological breakthroughs; and the Environmental Security Technology Certification Program, which develops and demonstrates cost-effective improvements in environmental and energy technologies for military installations and equipment. · Because of DoD’s size and demands for performance and reliability, it is unique among government and private sector organizations as a demonstration test-bed. Smart-grid technologies and advanced energy management systems for buildings are already poised to benefit from this aspect of the Pentagon’s innovation system. · DoD has collaborated effectively with other federal agencies, including the Department of Energy and its predecessors (for example, to advance nuclear energy technologies). Continuing competition and cooperation between DoD and DOE will spur energy innovation.  DoD’s innovation capabilities can enhance U.S. national security, improve U.S. international competitiveness, and spur global energy restructuring and greenhouse gas emissions reductions. At the same time, while providing enormous opportunities to develop and test energy efficiency technologies and small scale distributed energy appropriate to forward bases, the Pentagon is unlikely to become an all-purpose hub for advancing all categories of clean-energy technologies, because its energy innovation activities will be sustainable only where they can support the nation’s defense capabilities. Therefore, many other large-scale technologies that are of great importance to improving the environment, such as carbon-free central station generation or zero carbon transportation, may not as easily fit with DoD’s mission. Possible exceptions might include small modular nuclear reactors that can be used for producing independent, non-grid power at military bases, or, conceivably, zero-carbon liquid fuels other than anything resembling current generation biofuels.

#### Nuclear power is inevitable

IAEA applications

Middle class

Population growth

Urbanization

Warming

Desal

**Ebinger and Squassoni 11**

Charles K Ebinger and Sharon Squassoni 11, Charles is senior fellow and director of the Energy Security Initiative at the Brookings Institution, Sharon is senior fellow and director of the Proliferation Prevention Program at the Center for Strategic and International Studies, “Industry and Emerging Nuclear Energy Markets” in “Business and Nonproliferation”, googlebooks

As mentioned previously, **a notable feature of the nuclear renaissance is the widespread interest in nuclear power, especially in countries without a commercial nuclear infrastructure. According to the** International Atomic Energy Agency (**IAEA**), at least **sixty-five countries have expressed** such **interest**, most from outside the industrialized economies of the Organization of Economic Cooperation and Development (OECD), the main locus of nuclear power capacity at present. **Most of the capacity growth up to 2030 is expected to occur in the Middle East, South Asia, Southeast Asia, and the Far East**. As part of this growth, **eleven developing countries are serious candidates for first reactors**, although progress in carrying out their plans varies widely (see table 4-1). **These countries are drawing new suppliers into the nuclear market** (notably China, India, and South Korea) **and sparking activity among existing suppliers** such as Russia and Japan. Overall, however, many countries will not be able to follow through on growth plans owing to cost, limited grid capacity, and perhaps public resistance. **Countries are moving toward nuclear energy**, not the mention other sources of primary fuel, in large part **because of mounting demand: between 2008 and 2035 global electricity consumption is expected to increase 80 percent, and 80 percent of that growth will take place in non-OECD countries**. **Underlying this large increase in electricity demand are population growth, urbanization, concerns about CO2 emissions from fossil fuel combustion, energy security, and pressure from a growing middle class for goods and services using or produced by electricity**. **Over this period, global population will rise from 6.7 billion to 8.5 billion, with 7.2 billion of the total living in non-OECD countries**. **Most of this increase will take place in China, India, and the Middle East**, with the balance in the rest of the developing world, while the share of the global population in the OECD and Russia will decline. Today nearly 1.4 billion people have no electricity, a figure that may well increase with further population growth, despite movement into the modern energy economy. **Urbanization will undoubtedly push demand up as well**. For the first time in history, a majority of the world’s population is living in urban areas, a trend likely to continue, especially in developing countries. **With the movement of hundreds of millions of people from rural areas to cities, more communities will turn from traditional** and often free **fuels** (wood, forest residues, agricultural wastes, bagasse, and dung) **to modern fuels such as electricity, natural gas, and petroleum products**. **The dramatic growth of the middle class in a number of emerging market nations is also having a large impact on energy consumption. The World Bank predicts that by 2030 the middle class in these nations will jump to 1.2 billion from 430 million in 2000**. It is estimated that in India alone, a country that before Fukushima was developing plans for nuclear power, the number of households with an annual disposal income of $5,000-$15,000 will increase from 36 percent of the population in 2010 to more than 58 percent by 2020. **Climate change**, too, **will have some of its largest impact in developing countries**, which, according to the International Energy Agency (IEA), will be responsible for nearly all of the projected global increase in CO2 emissions by 2035. In large part, the cause of this rise is coal-fired power in China and India. **The urgency of finding alternatives to coal is recognized by** others as well, including **Indonesia, Pakistan, Poland, South Africa, and Russia**. Compared with developed countries, developing nations rely far more on imported fossil fuels, especially oil, to generate power. When the price of oil on the world market rose to $147 a barrel in 2008, it became clear that dependence on imported fossil fuels for electricity generation can destroy a nation’s economy and that fuel diversification is vital for energy security. As prices climbed beyond $100 a barrel, Jordan, a country committed to introducing civilian nuclear energy, was particularly hard hit: 99 percent of its electricity is generated from either oil or gas, 96 percent of which is imported. **Developing countries also see nuclear energy as a possible source of power for desalination plants, especially in the** Gulf Cooperation Council (**GCC**) **countries and elsewhere in the Middle East**. **As the demand for freshwater supplies increases** – along with the emphasis on limited the use of fossil fuels to generates electricity because of the impact of emissions, price volatility, and supply disruptions – **the nuclear option will be considered even more viable**. Moreover, some **countries with large resources of oil or gas**, **such as the** United Arab Emirates (**UAE**) **and Saudi Arabia**, **are hoping nuclear power will help reduce their domestic use of these fuels in generating power and will boost the financial benefits of exporting them**. **For some developing countries, status and geopolitics are undoubtedly important factors in considering the development or expansion of a civilian nuclear energy program**. **In the view of Turkey’s energy minister** Hilmi Guler, for instance, **nuclear technology is a requirement for a seat at the table with the ten most developed countries in the world**.

#### Incentives now, but they are insufficient

DoD Energy Blog 11

DoD Energy Blog, 2/16/11, Good Things in Small Packages:Small Reactors for Military Power Good Things in Small Packages:Small Reactors for Military Power, dodenergy.blogspot.com/2011/02/good-things-in-small-packagessmall.html

They conclude that DOD should lead the charge for small reactors to meet their own needs as well as to make sure that the US leads that industry’s development. When first written the paper mentioned that most of the technology was stymied somewhere between the drawing board and production. But there is good news in the President’s 2011 Budget for nukes. The New York Times reported that the budget contains $500 million over five years for DOE to complete two designs and secure National Regulatory Commission (NRC) approval. The reactors will be built entirely in a factory and trucked to the site, like “modular homes”. Sounds just like what Dr. Andres ordered. Only problem is that $500 million is only about half of the cost to get to NRC approval**.** Actual production is in the $2 billion neighborhood, and that is a pricey neighborhood. Enter Amory Lovins. Amory has often derided the cost for nuclear power as an unnecessary expenditure. His argument is that micropower is the way of the future, not big honking gigawatt nuclear power plants. Although there has been a resurgence in the interest in nuclear power, it is still difficult to find private investments willing to underwrite the expense. Maybe the development of small nukes for national security reasons will lead to cost effective small nukes for distributed micropower nationwide. Small reactors for FOBs are more problematic. Even Bagram only needs about 25 MW with other FOBS being smaller. Security will be the first concern. If someone tries a smash and grab at Fort Hood they have to go through a couple of armored divisions and have a long way to got to get away. Kabul to Peshawar is only 128 miles. Cost shouldn’t be an overriding factor in considering secure power, but even at a 75% cost reduction in production, half a billion for 25MW is a bit much. Of course if you could produce a 300MW system, Bagram could air condition Kabul! The real soft power. My buddy, T.C. the fighter pilot, would tell you that DOD's mission is to fight and win the Nation's wars, not spark business recovery. DOD needs to focus on conserving energy. “Reducing the consumption at Miramar by 50% might save a lot of fuel and money, but I'd rather reduce consumption by 50% at PB Jugroom even though the savings in gallons and dollars are tiny.” Reducing demand reduces risk. All that being said, it may well be worth DOE and DOD efforts to explore the potential. It is something that may be beyond the means of commercial entities, but not government (See China). If there is going to be a market here, let us not be left behind as we have been with other alternative energy production means.

#### Natural gas isn’t a solvency take out

Lamonica 12

Martin Lamonica is a senior writer covering green tech and cutting-edge technologies [August 9, 2012, “A Glut of Natural Gas Leaves Nuclear Power Stalled,” http://www.technologyreview.com/news/428737/a-glut-of-natural-gas-leaves-nuclear-power/]

Outside the United States, it's a different story. Unconventional sources of natural gas also threaten the expansion of nuclear, although the potential impact is less clear-cut. Around the world, there are 70 plants now under construction, but shale gas also looms as a key factor in planning for the future. Prices for natural gas are already higher in Asia and Europe, and shale gas resources are not as fully developed as they are the United States.¶ Some countries are also blocking the development of new natural gas resources. France, for instance, which has a strong commitment to nuclear, has banned fracking in shale gas exploration because of concerns over the environmental impact.¶ Fast-growing China, meanwhile, needs all the energy sources available and is building nuclear power plants as fast as possible.¶ Even in United States, of course, super cheap natural gas will not last forever. With supply exceeding demand, some drillers are said to be losing money on natural gas, which could push prices back up. Prices will also be pushed upward by utilities, as they come to rely on more natural gas for power generation, says James.¶ Ali Azad, the chief business development officer at energy company Babcock & Wilcox, thinks the answer is making nuclear power smaller, cheaper, and faster. His is one of a handful of companies developing small modular reactors that can be built in three years, rather than 10 or more, for a fraction of the cost of gigawatt-size reactors. Although this technology is not yet commercially proven, the company has a customer in the Tennessee Valley Authority, which expects to have its first unit online in 2021 (see "A Preassembled Nuclear Reactor").¶ "When we arrive, we will have a level cost of energy on the grid, which competes favorably with a brand-new combined-cycle natural gas plants when gas prices are between $6 to $8," said Azad. He sees strong demand in power-hungry China and places such as Saudia Arabia, where power is needed for desalination.¶ Even if natural gas remains cheaper, utilities don't want to find themselves with an overreliance on gas, which has been volatile on price in the past, so nuclear power will still contribute to the energy mix. "[Utilities] still continue [with nuclear] but with a lower level of enthusiasm—it's a hedging strategy," says Hans-Holger Rogner from the Planning and Economics Studies section of the International Atomic Energy Agency. "They don't want to pull all their eggs in one basket because of the new kid on the block called shale gas."¶

## 2AC

### AT Hege Bad

**Hegemonic strategy inevitable**

**Calleo ‘10**

Calleo, Director – European Studies Program and Professor @ SAIS, ‘10¶ (David P, “American Decline Revisited,” Survival, 52:4, 215 – 227)

The history of **the past two decades suggest**s **that adjusting to a plural world is not easy for the U**nited **S**tates. **As** its economic **strength is increasingly challenged by relative decline, it clings all the more to its peerless military prowess.** As the wars in **Iraq and Afghanistan have shown**, **that** overwhelming military power, evolved over the Cold War, is less and less effective. In many respects, **America's geopolitical imagination seems frozen in the posture of the Cold War. The** lingering **pretension to be the dominant power** everywhere **has encouraged** the United States to hazard **two** unpromising **land wars, plus a diffuse** and interminable **struggle against 'terrorism'.** Paying for these wars and the pretensions behind them confirms the United States in a new version of Cold War finance. Once more, unmanageable fiscal problems poison the currency, an old pathology that firmly reinstates the nation on its path to decline. It was the hegemonic Cold War role, after all, that put the United States so out of balance with the rest of the world economy. **In its hegemonic Cold War position, the U**nited **S**tates **found it necessary to run very large deficits and was able to finance them** simply **by creating and exporting** more and more **dollars**. The consequence is today's restless mass of accumulated global money. Hence, whereas the value of all global financial assets in 1980 was just over 100% of global output, by 2008, even after the worst of the financial implosion, that figure had exploded to just under 300%.25 Much of this is no doubt tied up in the massive but relatively inert holdings of the Chinese and Japanese. But **thanks to today's instantaneous electronic transfers**, **huge sums can be marshalled and deployed on very short notice**. It is **this excess of volatile money** that arguably fuels the world's great recurring bubbles. It can **create the semblance of vast real wealth** for a time, but can also (with little notice) sow chaos in markets, wipe out savings and dry up credit for real investment. What constitutes a morbid overstretch in the American political economy thus ends up as a threat to the world economy in general. To lead itself and the world into a more secure future the United States must put aside its old, unmeasured geopolitical ambitions paid for by unlimited cheap credit. Instead, the United States needs a more balanced view of its role in history. But **America's** post-Soviet **pundits have**, unfortunately, **proved more skilful at perpetuating outmoded dreams of past glory** **than** at **promoting** the more modest visions appropriate to **a plural future**. One can always hope that newer generations of Americans will find it easier to adjust to pluralist reality. The last administration, however, was not very encouraging in this regard. III What about Barack Obama? So far, his economic policy has shown itself probably more intelligent and certainly more articulate than his predecessor's. His thinking is less hobbled by simple-minded doctrines. It accepts government's inescapable role in regulating markets and providing a durable framework for orderly governance and societal fellowship. To be sure, the Obama administration, following in the path of the Bush administration, has carried short-term counter-cyclical stimulation to a previously unimagined level. Perhaps so radical an expansion of credit is unavoidable under present circumstances. The administration is caught between the need to rebalance by scaling back and the fear that restraint applied now will trigger a severe depression. Obama's chief aide, Rahm Emanuel, is famous for observing: 'Rule one: Never allow a crisis to go to waste. They are opportunities to do big things.'26 So far, Obama's administration has made use of its crisis to promote an unprecedented expansion of welfare spending.27 Much of the spending is doubtless good in itself and certainly serves the administration's strong counter-cyclical purposes. But at some point the need to pass from expansion to stabilisation will presumably be inescapable. Budget cuts will have to be found somewhere, and demographic trends suggest that drastic reductions in civilian welfare spending are unlikely. Elementary **prudence might suggest that today's** financial **crisis is an ideal occasion for America's** long-overdue **retreat** from geopolitical overstretch, a time for bringing America's geopolitical pretensions into harmony with its diminishing foreign possibilities and expanding domestic needs. The opportunities for geopolitical saving appear significant. According to the Congressional Budget Office (CBO), current military plans will require an average military budget of $652bn (in 2010 dollars) each year through 2028. The estimate optimistically assumes only 30,000 troops will be engaged abroad after 2013. As the CBO observes, these projections exceed the peak budgets of the Reagan administration's military build-up of the mid-1980s (about $500bn annually in 2010 dollars). This presumes a military budget consuming 3.5% of GDP through 2020.28 Comparable figures for other nations are troubling: 2.28% for the United Kingdom, 2.35% for France, 2.41% for Russia and 1.36% for China.29 Thus, while **the** financial **crisis has** certainly made Americans fear for their economic future, it does **not** yet seem to have **resulted in a more modest view of the country's place in the world,** **or a more prudent approach to military spending.** Instead**, an addiction to hegemonic status continues to blight** the **prospects** for sound fiscal policy. Financing the inevitable deficits inexorably turns the dollar into an imperial instrument that threatens the world with inflation.

**Heg is sustainable- challengers can’t make up the power differential, and trends point toward continued unipolarity**

**Beckley ‘12**

(Michael, PhD candidate at the Graduate School of Arts and Sciences at Columbia, The Unipolar Era: Why American Power Persists and China’s Rise Is Limited, Dissertation found on google scholar)

More important, the gap in defense spending likely understates the true military gap because U.S. economic superiority literally gives the United States “more bang for the buck” – each dollar it spends on the military produces more force than each dollar China spends. In a separate study, I found that developing countries systematically fail at warfare, regardless of the size of their defense budgets, because they lack the economic capacity to maintain, modernize, and integrate individual technologies into cohesive military systems.206 Multivariate regressions suggest that military effectiveness is determined by a country’s level of economic development, as measured by per capita income, even after controlling for numerous material, social, and political factors. As noted earlier, China’s per capita income has declined relative to that of the United States. China’s defense industry has also fallen further behind: in 2008, the U.S. share of the world conventional arms market surged to 68 percent while China’s share dropped below 1.5 percent. If history is any guide, this growing economic gap is also a growing military gap. The PLA may look increasingly respectable on paper, but its performance in battle against the United States would not necessarily be much better than that of, say, Iraq circa 1991. Indeed, **an independent task force of more than thirty experts recently found “no evidence to support the notion that China will become a peer military competitor of the United States.…The military balance today and for the foreseeable future strongly favors the United States** and its allies.”207 Figure 3.20: Share of World Arms Transfer Agreements, 1993-­‐2008 Source: Congressional Research Service, Conventional Arms Transfers to Developing Nations, 2001-­‐2008, p. 71; Ibid., Conventional Arms Transfers to Developing Nations, 1993-­‐2000, p. 73. None of this should be cause for chest-­‐thumping. China can “pose problems without catching up,” compensating for its technological and organizational inferiority by utilizing asymmetric strategies, local knowledge, and a greater willingness to bear costs.208 In particular, some experts believe China’s “anti-area-­‐denial” capabilities are outpacing U.S. efforts to counter them.209 There are reasons to doubt this claim – the Pentagon is developing sophisticated countermeasures and Chinese writings may purposefully exaggerate PLA capabilities.210 There is also reason to doubt the strategic importance of China’s capabilities because the United States may be able to launch effective attacks from positions beyond the reach of Chinese missiles and submarines.211 It is certainly true, however, that the U.S. military has vulnerabilities, especially in littorals and low-­‐altitudes close to enemy territory. But this has always been the case. From 1961 to 1968 North Vietnamese and Vietcong units brought down 1,700 U.S. helicopters and aircraft with simple antiaircraft artillery and no early warning radar.212 Sixty years ago, China projected a huge army into Korea and killed tens of thousands of U.S. soldiers. **Yes, weak adversaries can impose significant costs, but evidence of American vulnerability is not the same as evidence of American decline.** Conclusion Change is inevitable, but it is often incremental and nonlinear. **In the coming decades, China may surge out of its unimpressive condition and close the gap with the United States. Or China might continue to rise in place – steadily improving its capabilities in absolute terms while stagnating, or even declining, relative to the United States**. The best that can be done is to make plans for the future on the basis of present trends. And **what the trends suggest is that America’s economic, technological, and military lead over China will be an enduring feature of international relations, not a passing moment in timesssss, but a deeply embedded material condition that will persist for the foreseeable future.**

**Decline makes all their turns worse- US will be more violent post decline**

**Dupont June ‘12**

(Alan, professor of international security and director of the Institute for International Security and Development at the University of New South Wales in Sydney, Australia, An Asian Security Standoff, The National Interest, lexis)

**What of the argument that America should accept the inevitable and share power with China** as an equal? Paralleling the G-2 would be an Asia-2, allowing Beijing and Washington to divide the region into spheres of influence in much the same way as the United States and the Soviet Union managed a politically bifurcated Europe during the early part of the Cold War. **While superficially appealing** because it holds out the prospect of a peaceful transition to a new international order, **power sharing** between the United States and China **is unlikely** to work for two reasons. First, **no U.S. administration, regardless of its political complexion, would voluntarily relinquish power to China**, just as China wouldn’t if the roles were reversed. Second, China’s new great-power status is hardly untrammeled. Nor is it guaranteed to last, for the country faces formidable environmental, resource, economic and demographic challenges, not to mention **a rival United States that shows no sign of lapsing into terminal decline despite its current economic travails**. **Sooner than it thinks, Beijing may have to confront the prospect of a resurgent Washington determined to reassert its strategic interests.**

**Their turns are inevitable – no us withdrawal – we’ll be engaged globally – the only question is effectiveness**

**Shalmon and Horowitz 09**

(Dan, Graduate Student in the PhD Program in Political Science - International Relations at University of Illinois at Urbana-Champaign, Mike, Assistant Professor of Political Science at the University of Pennsylvania- Philadelphia, Orbis, Spring)

**It is important to recognize at the outset** two **key points about United** **States strategy and the potential costs and benefits for the United States in a changing security environment. First, the United States is very likely to remain fully engaged in global affairs. Advocates of restraint or global withdrawal, while popular in some segments of academia, remain on the margins of policy debates in Washington D.C**. This could always change, of course. However, at present, **it is a given that the United States will define its interests globally and pursue a strategy that requires capable military forces able to project power around the world**. Because ‘‘indirect’’ counter-strategies are the rational choice for actors facing a strong state’s power projection, irregular/asymmetric threats are inevitable given America’s role in the global order.24

### Terror Talk

#### Threats are not socially constructed- decision makers use the most objective, rational, and accurate assessments possible- there are no bureaucratic or ideological motivations to invent threats.

Ravenal ‘9

[Earl C. Ravenal, distinguished senior fellow in foreign policy studies @ Cato, is professor emeritus of the Georgetown University School of Foreign Service. He is an expert on NATO, defense strategy, and the defense budget. He is the author of *Designing Defense for a New World Order.* What's Empire Got to Do with It? The Derivation of America's Foreign Policy.” *Critical Review: An Interdisciplinary Journal of Politics and Society* 21.1 (2009) 21-75]

Quite expectedly, the more doctrinaire of the non-interventionists take pains to deny any straightforward, and therefore legitimate, security motive in American foreign and military policy. In fact, this denial leads to a more sweeping rejection of any recognizably rational basis for American foreign policy, and, even, sometimes (among the more theoretical of the non-interventionists), a preference for non-rational accounts, or “models,” of virtually any nation’s foreign policy-making.4 One could call this tendency among anti-imperialists “motive displacement.” More specifically, in the cases under review here, one notes a receptivity to any reworking of history, and any current analysis of geopolitics, that denigrates “the threat”; and, along with this, a positing of “imperialism” (the almost self-referential and primitive impulse) as a sufficient explanation for the often strenuous and risky actions of great powers such as the United States. Thus, not only is “empire” taken to be a sufficient and, in some cases, a necessary condition in bringing about foreign “threats”; but, by minimizing the extent and seriousness of these threats, the anti-imperialists put themselves into the position of lacking a rational explanation for the derivation of the (pointless at best, counter-productive at worst) policies that they designate as imperialistic. A pungent example of this threat denigration and motive displacement is Eland’s account of American intervention in the Korean and Vietnam wars:

After North Korea invaded, the Truman administration intervened merely for the purpose of a demonstration to friends and foes alike. Likewise, according to eminent cold war historians, the United States did not inter- vene in Vietnam because it feared communism, which was fragmented, or the Soviet Union, which wanted détente with the West, or China, which was weak, but because it did not want to appear timid to the world. The behavior of the United States in both Korea and Vietnam is typical of imperial powers, which are always concerned about their reputation, pres- tige, and perceived resolve. (Eland 2004, 64)

Of course, the motive of “reputation,” to the extent that it exists in any particular instance, is a part of the complex of motives that characterize a great power that is drawn toward the role of hegemon (not the same thing as “empire”). Reputation is also a component of the power projec- tion that is designed to serve the interest of national security. Rummaging through the concomitants of “imperialism,” Eland (2004, 65) discovers the thesis of “threat inflation” (in this case, virtual threat invention): Obviously, much higher spending for the military, homeland security, and foreign aid are required for a policy of global intervention than for a policy of merely defending the republic. For example, after the cold war, the security bureaucracies began looking for new enemies to justify keeping defense and intelligence budgets high. Similarly, Eland (ibid., 183), in a section entitled “Imperial Wars Spike Corporate Welfare,” attributes a large portion of the U.S. defense budget—particularly the procurement of major weapons systems, such as “Virginia-class submarines . . . aircraft carriers . . . F-22 fighters . . . [and] Osprey tilt-rotor transport aircraft”—not to the systemically derived requirement for certain kinds of military capabilities, but, rather, to the imperatives of corporate pork. He opines that such weapons have no stra- tegic or operational justification; that “the American empire, militarily more dominant than any empire in world history, can fight brushfire wars against terrorists and their ‘rogue’ state sponsors without those gold- plated white elephants.”

The underlying notion of “the security bureaucracies . . . looking for new enemies” is a threadbare concept that has somehow taken hold across the political spectrum, from the radical left (viz. Michael Klare [1981], who refers to a “threat bank”), to the liberal center (viz. Robert H. Johnson [1997], who dismisses most alleged “threats” as “improbable dangers”), to libertarians (viz. Ted Galen Carpenter [1992], Vice President for Foreign and Defense Policy of the Cato Institute, who wrote a book entitled A Search for Enemies). What is missing from most analysts’ claims of “threat inflation,” however, is a convincing theory of why, say, the American government significantly (not merely in excusable rhetoric) might magnify and even invent threats (and, more seriously, act on such inflated threat estimates). In a few places, Eland (2004, 185) suggests that such behavior might stem from military or national security bureaucrats’ attempts to enhance their personal status and organizational budgets, or even from the influence and dominance of “the military-industrial complex”; viz.: “Maintaining the empire and retaliating for the blowback from that empire keeps what President Eisenhower called the military-industrial complex fat and happy.” Or, in the same section:

In the nation’s capital, vested interests, such as the law enforcement bureaucracies . . . routinely take advantage of “crises”to satisfy parochial desires. Similarly, many corporations use crises to get pet projects— a.k.a. pork—funded by the government. And national security crises, because of people’s fears, are especially ripe opportunities to grab largesse. (Ibid., 182)

Thus, “bureaucratic-politics” theory, which once made several reputa- tions (such as those of Richard Neustadt, Morton Halperin, and Graham Allison) in defense-intellectual circles, and spawned an entire sub-industry within the field of international relations,5 is put into the service of dismissing putative security threats as imaginary. So, too, can a surprisingly cognate theory, “public choice,”6 which can be considered the right-wing analog of the “bureaucratic-politics” model, and is a preferred interpretation of governmental decision- making among libertarian observers. As Eland (2004, 203) summarizes:

Public-choice theory argues [that] the government itself can develop sepa- rate interests from its citizens. The government reflects the interests of powerful pressure groups and the interests of the bureaucracies and the bureaucrats in them. Although this problem occurs in both foreign and domestic policy, it may be more severe in foreign policy because citizens pay less attention to policies that affect them less directly.

There is, in this statement of public-choice theory, a certain ambiguity, and a certain degree of contradiction: Bureaucrats are supposedly, at the same time, subservient to societal interest groups and autonomous from society in general.

This journal has pioneered the argument that state autonomy is a likely consequence of the public’s ignorance of most areas of state activity (e.g., Somin 1998; DeCanio 2000a, 2000b, 2006, 2007; Ravenal 2000a). But state autonomy does not necessarily mean that bureaucrats substitute their own interests for those of what could be called the “national society” that they ostensibly serve. I have argued (Ravenal 2000a) that, precisely because of the public-ignorance and elite-expertise factors, and especially because the opportunities—at least for bureaucrats (a few notable post-government lobbyist cases nonwithstanding)—for lucrative self-dealing are stringently fewer in the defense and diplomatic areas of government than they are in some of the contract-dispensing and more under-the-radar-screen agencies of government, the “public-choice” imputation of self-dealing, rather than working toward the national interest (which, however may not be synonymous with the interests, perceived or expressed, of citizens!) is less likely to hold. In short, state autonomy is likely to mean, in the derivation of foreign policy, that “state elites” are using rational judgment, in insulation from self-promoting interest groups—about what strategies, forces, and weapons are required for national defense.

Ironically, “public choice”—not even a species of economics, but rather a kind of political interpretation—is not even about “public” choice, since, like the bureaucratic-politics model, it repudiates the very notion that bureaucrats make truly “public” choices; rather, they are held, axiomatically, to exhibit “rent-seeking” behavior, wherein they abuse their public positions in order to amass private gains, or at least to build personal empires within their ostensibly official niches. Such sub- rational models actually explain very little of what they purport to observe. Of course, there is some truth in them, regarding the “behavior” of some people, at some times, in some circumstances, under some conditions of incentive and motivation. But the factors that they posit operate mostly as constraints on the otherwise rational optimization of objectives that, if for no other reason than the playing out of official roles, transcends merely personal or parochial imperatives.

My treatment of “role” differs from that of the bureaucratic-politics theorists, whose model of the derivation of foreign policy depends heavily, and acknowledgedly, on a narrow and specific identification of the role- playing of organizationally situated individuals in a partly conflictual “pulling and hauling” process that “results in” some policy outcome. Even here, bureaucratic-politics theorists Graham Allison and Philip Zelikow (1999, 311) allow that “some players are not able to articulate [sic] the governmental politics game because their conception of their job does not legitimate such activity.” This is a crucial admission, and one that points— empirically—to the need for a broader and generic treatment of role.

Roles (all theorists state) give rise to “expectations” of performance. My point is that virtually every governmental role, and especially national-security roles, and particularly the roles of the uniformed mili- tary, embody expectations of devotion to the “national interest”; rational- ity in the derivation of policy at every functional level; and objectivity in the treatment of parameters, especially external parameters such as “threats” and the power and capabilities of other nations.

Sub-rational models (such as “public choice”) fail to take into account even a partial dedication to the “national” interest (or even the possibility that the national interest may be honestly misconceived in more paro- chial terms). In contrast, an official’s role connects the individual to the (state-level) process, and moderates the (perhaps otherwise) self-seeking impulses of the individual. Role-derived behavior tends to be formalized and codified; relatively transparent and at least peer-reviewed, so as to be consistent with expectations; surviving the particular individual and trans- mitted to successors and ancillaries; measured against a standard and thus corrigible; defined in terms of the performed function and therefore derived from the state function; and uncorrrupt, because personal cheating and even egregious aggrandizement are conspicuously discouraged.

My own direct observation suggests that defense decision-makers attempt to “frame” the structure of the problems that they try to solve on the basis of the most accurate intelligence. They make it their business to know where the threats come from. Thus, threats are not “socially constructed” (even though, of course, some values are).

A major reason for the rationality, and the objectivity, of the process is that much security planning is done, not in vaguely undefined circum- stances that offer scope for idiosyncratic, subjective behavior, but rather in structured and reviewed organizational frameworks. Non-rationalities (which are bad for understanding and prediction) tend to get filtered out. People are fired for presenting skewed analysis and for making bad predictions. This is because something important is riding on the causal analysis and the contingent prediction. For these reasons, “public choice” does not have the “feel” of reality to many critics who have participated in the structure of defense decision-making. In that structure, obvious, and even not-so-obvious, “rent-seeking” would not only be shameful; it would present a severe risk of career termination. And, as mentioned, the defense bureaucracy is hardly a productive place for truly talented rent-seekers to operate, compared to opportunities for personal profit in the commercial world. A bureaucrat’s very self-placement in these reaches of government testi- fies either to a sincere commitment to the national interest or to a lack of sufficient imagination to exploit opportunities for personal profit.

#### Terrorists have religious motivations that make discourse and compromise meaningless. The only way to win the war we are in is to kill them before they kill us.¶

Peters 4

 - (Ralph, Retired Army Officer, “In Praise of Attrition,” Parameters, Summer)¶

Trust me. We don’t need discourses. We need plain talk, honest answers, and the will to close with the enemy and kill him. And to keep on killing him until it is unmistakably clear to the entire world who won. When military officers start speaking in academic gobbledygook, it means they have nothing to contribute to the effectiveness of our forces. They badly need an assignment to Fallujah. Consider our enemies in the War on Terror. Men who believe, literally, that they are on a mission from God to destroy your civilization and who regard death as a promotion are not impressed by elegant maneuvers. You must find them, no matter how long it takes, then kill them. If they surrender, you must accord them their rights under the laws of war and international conventions. But, as we have learned so painfully from all the mindless, left-wing nonsense spouted about the prisoners at Guantanamo, you are much better off killing them before they have a chance to surrender. We have heard no end of blather about network-centric warfare, to the great profit of defense contractors. If you want to see a superb—and cheap—example of “net-war,” look at al Qaeda. The mere possession of technology does not ensure that it will be used effectively. And effectiveness is what matters. It isn’t a question of whether or not we want to fight a war of attrition against religion-fueled terrorists. We’re in a war of attrition with them. We have no realistic choice. Indeed, our enemies are, in some respects, better suited to both global and local wars of maneuver than we are. They have a world in which to hide, and the world is full of targets for them. They do not heed laws or boundaries. They make and observe no treaties. They do not expect the approval of the United Nations Security Council. They do not face election cycles. And their weapons are largely provided by our own societies. We have the technical capabilities to deploy globally, but, for now, we are forced to watch as Pakistani forces fumble efforts to surround and destroy concentrations of terrorists; we cannot enter any country (except, temporarily, Iraq) without the permission of its government. We have many tools—military, diplomatic, economic, cultural, law enforcement, and so on—but we have less freedom of maneuver than our enemies. But we do have superior killing power, once our enemies have been located. Ultimately, the key advantage of a superpower is superpower. Faced with implacable enemies who would kill every man, woman, and child in our country and call the killing good (the ultimate war of attrition), we must be willing to use that power wisely, but remorselessly. We are, militarily and nationally, in a transition phase. Even after 9/11, we do not fully appreciate the cruelty and determination of our enemies. We will learn our lesson, painfully, because the terrorists will not quit. The only solution is to kill them and keep on killing them: a war of attrition. But a war of attrition fought on our terms, not theirs. Of course, we shall hear no end of fatuous arguments to the effect that we can’t kill our way out of the problem. Well, until a better methodology is discovered, killing every terrorist we can find is a good interim solution. The truth is that even if you can’t kill yourself out of the problem, you can make the problem a great deal smaller by effective targeting. And we shall hear that killing terrorists only creates more terrorists. This is sophomoric nonsense. The surest way to swell the ranks of terror is to follow the approach we did in the decade before 9/11 and do nothing of substance. Success breeds success. Everybody loves a winner. The clichés exist because they’re true. Al Qaeda and related terrorist groups metastasized because they were viewed in the Muslim world as standing up to the West successfully and handing the Great Satan America embarrassing defeats with impunity. Some fanatics will flock to the standard of terror, no matter what we do. But it’s far easier for Islamic societies to purge themselves of terrorists if the terrorists are on the losing end of the global struggle than if they’re allowed to become triumphant heroes to every jobless, unstable teenager in the Middle East and beyond. Far worse than fighting such a war of attrition aggressively is to pretend you’re not in one while your enemy keeps on killing you. Even the occupation of Iraq is a war of attrition. We’re doing remarkably well, given the restrictions under which our forces operate. But no grand maneuvers, no gestures of humanity, no offers of conciliation, and no compromises will persuade the terrorists to halt their efforts to disrupt the development of a democratic, rule-of-law Iraq. On the contrary, anything less than relentless pursuit, with both preemptive and retaliatory action, only encourages the terrorists and remaining Baathist gangsters.

**Fiscal Cliff**

**Immigration reform is at the top of the agenda**

Manu **Raji** (writer for Politico) **November 7**, 2012 “Harry Reid agenda: Filibuster crackdown, tax increases” http://www.politico.com/news/stories/1112/83514.html

Once the procedural snafus are resolved, Reid said “**very high” on his priority list will be an attempt to pass an immigration overhaul, an issue important to the Latino community that powered Tuesday night’s Democratic wins.** But **it would certainly start a divisive and emotional debate certain to alienate conservative members of both parties. Reid said he could get 90 percent of his caucus to support such a measure**. Republicans, he said, would block immigration reform “at their peril.” “Not for political reasons; because it’s the wrong thing to do to not have comprehensive immigration reform,” Reid said. “The system’s broken and needs to be fixed.”

**No Pass- Obama won’t have capital**

**Chicago Tribune 11-1**

“Economic Uncertainty to Linger: Even After Election,”

While action isn't required until the end of December, analysts anticipate that the afterglow of the presidential election will quickly dissipate during the next two months as investors grow anxious about the December deadline and the potential outcome for the economy.¶ "Continued gridlock is a risk," Chadha said. On the other hand, "bipartisan compromise with orderly negotiations would see equities rally."¶ But current political **polls indicate** that **neither candidate will win with a mandate**. So analysts are not anticipating orderly negotiation on tax and spending cuts this year or next.¶ "**A close race or disputed result could reduce the political capital of the winner, diminishing prospects for a compromise solution for the fiscal cliff in the lame-duck session of Congress**," said Citigroup global political analyst Tina Fordham.¶

**No impact – their evidence is political posturing**

Taylor **Marsh October 25,** 2012 “Move to Stop Obama s Bad Lame Duck Entitlement Deal has Already Begun” Lexis

It is known in Washington as the fiscal cliff. But policy and economic analysts projecting its complicated and wide-ranging potential impact said the term fiscal hill or **fiscal slope might be more apt: the effect would be powerful but gradual, and** in some cases, **reversible**. **The slope would likely be relatively modest at first**, Chad **Stone, the chief economist at the Center on Budget and Policy Priorities,** a research group based in Washington, **wrote in a recent analysis**. A relatively brief implementation of the tax and spending changes required by **current law should cause little short-term damage to the economy** as a whole. [...] Moreover, **while the fiscal cliff would be enormous in annual terms, its effect would be cumulative, not immediate, analysts have noted. Households hit by the tax increases might not notice the $10 or $100 missing from their paychecks, even if it would damp their spending over the course of the year.** Agencies hit by the spending cuts might not act immediately. **There is absolutely no need to ram through a fiscal cliff deal before January, but that s what you ll hear. It s timed perfectly with the holidays when people are tuning out, after an election that s exhausted everyone.** The gaping maw of economic reality, however, revolves around one irrefutable fact. If we get the economy moving **the deficit would not give reason for panic**. The goal is to stop a deal in the lame duck. The effort has already begun.

**Plan popular in Congress- Only 1 vote against it and both parties cosponsor**

**Pendidikan ‘11**

Cinta writes for the Love and Like Education Blog, “Sanders is the Sole Vote Against Small Modular Reactor Research,” <http://loveandlikeeducation.blogspot.com/2011/08/bernie-sanders-and-small-modular.html>

**Sanders is Sole Vote Against Small Modular Reactor Research**¶ Bernie Sanders and Small Modular Reactors¶ Senator Bernie Sanders often speaks about his opposition to Vermont Yankee as having something to do with the age of the plant, the fact it is owned by Entergy, or his "state's rights" stance about regulating nuclear power plants.¶ Recently, however, Sanders made it clear that he is against nuclear power in any form and is proud of that opinion. On Senator Sanders website, he featured the fact that he was the only vote against "a pair of measures that would promote the development of small modular reactors."¶ One of these measures was the Nuclear Power Act S512. **This act would authorize the Secretary of Energy to start a cost-shared program for development o**f small modular reactors **(SMRs).¶ This act had strong bi-partisan support, being sponsored by 3 Republican and 4 Democratic Senators. The act requires research and development funds for SMRs.** The Act is still in process, and does not have a firm dollar amount attached, but the dollar amount is likely to be small (in government terms, at least.). **Current estimates are $100 million per fiscal year** for four years, starting next year.¶ The act also requires that industry cost-share the expense. If industry doesn't think it is worth spending money on the research, the research will not receive government funding either.¶ As a background to the probable cost of this Act, we should note that President Obama requested $4.8 billion dollars for Department of Energy research, of which $3.2 billion is allocated for renewable energy and energy efficiency research. (This number has changed with the debt deal, but new numbers are not available at this time.)¶ Small Modular Reactors for The Future¶ Sander's opposition to this Nuclear Power Act will hurt America's chances to develop an important new exportable technology. Outside of Europe, the nuclear renaissance remains in full swing, with reactors being ordered and built in Arabia, China, India and Southeast Asia. Developing a strong set of SMR designs would be America's best chance to re-entering the world market for nuclear power.¶ SMRs are modular (assembled in a factory and delivered to the site), small (50 to 225 MW) and have many safety features, such as passive cooling. SMRs are expected to have a huge international market. They suitable for many places that do not have the population density or money for the current crop of huge reactors (1200 MW, built on site at great expense). SMRs would make nuclear power affordable and salable many places.¶ Westinghouse and Babcock & Wilcox have invested significant amounts of their own money in developing these products. The NRC is also active in assessing preliminary designs. At another Senate committee meeting on SMRs, Commissioner Magwood of the NRC said that he does not expect decisions made by the NRC to be the critical factor in the success or failure of SMRs. Magwood noted that SMRs have passive safety features and large water inventories; these would be considered during license review.¶ America Fallen Behind¶ America has fallen far behind the rest of the world in most nuclear technologies. Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs) were developed in this country. They are being sold all over the world, but not by United States companies. We're out of the running. Other countries licensed and improved our original technologies. Companies from France, Korea, Russia and China compete to build large reactors in China, Arabia, and Southeast Asia.¶ Three American companies have put millions of dollars into the development of SMRs: Westinghouse, Babcock & Wilcox, and NuScale (a small start-up). Many people in the nuclear industry feel that the race to develop the first successful SMR is a truly high-stakes race, being fought at the level of nationwide efforts. Luckily, SMR development has bi-partisan support, and Mr. Sanders was alone in his opposition to supporting American industry efforts to develop these plants.¶ Should Government Be Involved?¶ Of course, one can make a case that the government should get out of the energy research business altogether. If Senator Sanders wished to save tax dollars by cutting all energy-research programs, he might have a valid case. However, if the government does plan to spend money on energy research, cost-sharing with industry on a new nuclear technology is certainly a far better use of funds than many of the projects in the swollen DOE renewable budget.

**Bipart support for SMR’s in Congress**

**E&E News 9-24**

“DOE Funding for Small Reactors Languishes as Parties Clash on Debt,” <http://www.eenews.net/public/Greenwire/2012/09/24/3>

Some of the nation's largest nuclear power companies are anxious to hear whether they will get a share of a $452 million pot from the Department of Energy for a new breed of reactors that the industry has labeled as a way to lessen the safety risks and construction costs of new nuclear power plants.¶ The grant program for these "small modular reactors," which was announced in January, would mark the official start of a major U.S. foray into the technology even as rising construction costs -- especially when compared to natural-gas-burning plants -- cause many power companies to shy away from nuclear plants.¶ DOE received four bids before the May 21 deadline from veteran reactor designers Westinghouse Electric Co. and Babcock & Wilcox Co., as well as relative newcomers Holtec International Inc. and NuScale Power LLC. Now the summer has ended with no announcement from DOE, even though the agency said it would name the winners two months ago.¶ As the self-imposed deadline passed, companies started hearing murmurs that a decision could come in September, or perhaps at the end of the year. To observers within the industry, it seems that election-year calculations may have sidelined the contest.¶ "The rumors are a'flying," said Paul Genoa, director of policy development at the Nuclear Energy Institute, in an interview last week. "All we can imagine is that this is now caught up in politics, and the campaign has to decide whether these things are good for them to announce, and how**."¶ Small modular reactors do not seem to be lacking in political support. The nuclear lobby** has historically **courted both Democrats and Republicans and** still **sees itself as being in a strong position with key appropriators on both sides of the aisle**.¶ Likewise, **top energy officials in the Obama administration have hailed the promise of the new reactors, and they haven't shown any signs of a change of heart.** DOE spokeswoman Jen Stutsman said last week that the department is still reviewing applications, but she did not say when a decision will be made.¶ "This is an important multiyear research and development effort, and we want to make sure we take the time during the review process to get the decision right," she wrote in an email.¶ That the grants haven't been given out during a taut campaign season, even as President Obama announces agency actions ranging from trade cases to creating new national monuments to make the case for his re-election, may be a sign that the reactors are ensnared in a broader feud over energy spending.¶ Grant recipients would develop reactor designs with an eye toward eventually turning those into pilot projects -- and the loan guarantees that these first-of-a-kind nuclear plants are using today to get financing would be blocked under the "No More Solyndras" bill that passed the House last week (Greenwire, Sept. 14).

**Political capital theory false—can’t influence agenda**

**Dickinson 9**(Matthew, professor of political science at Middlebury College, May 26, "Sotomayor, Obama and Presidential Power, "http://blogs.middlebury.edu/presidentialpower/2009/05/26/sotamayor-obama-and-presidential-power/)

What is of more interest to me, however, is what her selection reveals about the basis of presidential power.  **Political scientists**, like baseball writers evaluating hitters, **have devised numerous means of measuring a president’s influence in Congress**.  I will devote a separate post to discussing these, but in brief, they often center on the creation of legislative “box scores” designed to measure how many times a president’s preferred piece of legislation, or nominee to the executive branch or the courts, is approved by Congress.  That is, how many pieces of legislation that the president supports actually pass Congress? How often do members of Congress vote with the president’s preferences?  How often is a president’s policy position supported by roll call outcomes?  **These measures**, however, **are a misleading gauge of presidential power – they are a better indicator of congressional power.**  This is because **how members of Congress vote on a nominee or legislative item is rarely influenced by anything a president does**.  Although journalists (and political scientists) often focus on the legislative “endgame” to gauge presidential influence – will the President swing enough votes to get his preferred legislation enacted? – **this mistakes an outcome with actual evidence of presidential influence.  Once we control for other factors – a member of Congress’ ideological and partisan leanings, the political leanings of** her **constituency,** whether she’s up for **reelection** or not – **we can usually predict how she will vote without needing to know much of anything about what the president wants.**  (I am ignoring the importance of a president’s veto power for the moment.) Despite the much publicized and celebrated instances of presidential arm-twisting during the legislative endgame, then, **most legislative outcomes don’t depend on presidential lobbying**.  But this is not to say that presidents lack influence.  Instead, the primary means by which presidents influence what Congress does is through their ability to determine the alternatives from which Congress must choose.  That is, **presidential power is largely an exercise in agenda-setting** – not arm-twisting.   And we see this in the Sotomayer nomination.  Barring a major scandal, she will almost certainly be confirmed to the Supreme Court whether Obama spends the confirmation hearings calling every Senator or instead spends the next few weeks ignoring the Senate debate in order to play Halo III on his Xbox.  That is, how senators decide to vote on Sotomayor will have almost nothing to do with Obama’s lobbying from here on in (or lack thereof).  His real influence has already occurred, in the decision to present Sotomayor as his nominee.

####  ( ) No Chinese Economy Impact —

#### A. Won’t affect the government or cause lashout.

Blackwill 2009 – former associate dean of the Kennedy School of Government and Deputy Assistant to the President and Deputy National Security Advisor for Strategic Planning (Robert, RAND, “The Geopolitical Consequences of the World Economic Recession—A Caution”, http://www.rand.org/pubs/occasional\_papers/2009/RAND\_OP275.pdf, WEA)

Next, China. Again, five years from today. Did the recession undermine the grip of the Chinese Communist Party on the People’s Republic of China (PRC)? No. Again, as Lee Kuan Yew stressed in the same recent speech, “China has proven itself to be pragmatic, resilient and adaptive. The Chinese have survived severe crises—the Great Leap Forward and the Cultural Revolution—few societies have been so stricken. These are reasons not to be pessimistic.” Did the crisis make Washington more willing to succumb to the rise of Chinese power because of PRC holdings of U.S. Treasury Bonds? No. Did it alter China’s basic external direction and especially its efforts, stemming from its own strategic analysis, to undermine the U.S. alliance system in Asia? No. Did it cause the essence of Asian security to transform? No.

#### B. Chinese economy resilient – urbanization, investment, and stimulus prove

Reuters 11(Kevin Yao, June 23, “Analysis: China economy resilient, for now”, http://www.reuters.com/article/2011/06/23/us-china-economy-growth-idUSTRE75M1AO20110623) RA

BEIJING (Reuters) – China's growth is slowing under the weight of Beijing's anti-inflation campaign and weaker global demand, but any investors betting on a hard landing would be underestimating the resilience of the world's second-largest economy. China's relentless urbanization continue to drive expansion even as Beijing seeks to check unfettered investment by growth-obsessed local authorities, while stronger domestic consumption is providing a firmer cushion against external shocks. China bears may have been emboldened on Thursday by a purchasing managers' survey showing growth in the factory sector nearly stalled in June as new export orders fell. But skeptics who are expecting an abrupt economic slowdown may have miscalculated Beijing's resolve to act quickly if needed to revive growth, especially if inflation eases later this year as expected, reducing the need for fresh monetary tightening measures, analysts say. "The economy is set up for growth. You've still got urbanization and industrialization to come and all the incentives at local government levels are still to do with encouraging growth," said Stephen Green, an economist at Standard Chartered Bank in Hong Kong. "People always over-worry about a China hard landing. Clearly there are a lot of problems with the economy but people may underestimate the government's ability to muddle through." Green expects some policy relaxation later this year as price pressures start to moderate. NO HARD LANDING? Global investors are unnerved by any sign of a slowdown in China, a key global growth engine, even as the U.S. economic recovery loses momentum and Europe struggles with a sovereign debt crisis. An abrupt slowdown in China could hammer international financial markets and stifle demand for commodities from iron ore to soybeans. The economy has expanded at an average annual pace of 10 percent in the past three decades. Fears of a hard landing have gained traction as a recent stream of data showed the turbo-charged economy is cooling, but for now China shows no signs of following the West with growth levels falling well below long-term trends. Indeed, most market watchers typically define a hard landing in the Chinese context as a sudden dip in quarterly GDP growth below 8 percent, a level advanced economies can only dream about. The 8 percent threshold is, more importantly, a political line in the sand for Beijing, which it deems to be the minimum level needed to create enough jobs to ensure social stability. The last time the economy showed signs of a sudden slump, during the depths of the global financial crisis in late 2008, Beijing announced a 4 trillion yuan ($600 billion) stimulus plan, quickly returning to double-digit growth. While few argue with the success of that scheme, many economists say the spending binge also sowed the seeds of inflation and created excesses such as unrestrained lending and property bubbles which are aggravating imbalances in the economy, leaving it more vulnerable if the current "soft patch" in Western demand turns out to be a prolonged downturn. MORE STIMULUS? Policymakers will certainly have more room to consider fresh pump-priming if inflation peaks in June or July near 6 percent, as widely expected, and then moderates steadily in the second-half of the year. Dong Tao, an economist at Credit Suisse, believes the central bank will not rush to relax policy for fear of fueling further property price rises, but said the government will unleash its spending power to prevent growth from slowing too much. "Should the threat of a hard landing emerge, we would expect fiscal stimulus to come to the rescue, instead of monetary easing. Providing funding to policy housing and speeding up infrastructure projects would be the easy options," he said. China has already announced an ambitious plan to start building and upgrading 36 million affordable homes between 2011-2015, with 10 million to be completed this year, to quell growing public discontent over rapidly rising house prices. Many economists, while trimming their growth forecasts for China, don't believe the current slowdown will amount to a slump akin to that during the global financial crisis. Most still expect GDP growth of more than 9 percent in the second quarter from a year earlier compared with 9.7 percent in the first quarter, with full-year growth seen at about 9 percent. "I'm not worried about the risk of a hard landing in China. It's a low-probability event this year and next year," said Gao Shanwen, chief economist at China Essence Securities in Beijing. After all, a gentle easing in growth is exactly what Beijing wants and is in line with its policy to priorities' efforts to cool inflation. "The slowdown is essentially part of the deal. you need to a slowdown to reduce excesses and control inflation," said Kevin Lai, economist at Daiwa Global Markets in Hong Kong.

**2AC Econ Speed K**

#### Life should be valued as apriori – it precedes the ability to value anything else

Amien Kacou. 2008. WHY EVEN MIND? On The A Priori Value Of “Life”, Cosmos and History: The Journal of Natural and Social Philosophy, Vol 4, No 1-2 (2008) cosmosandhistory.org/index.php/journal/article/view/92/184

Furthermore, that manner of finding things good that is in pleasure can certainly not exist in any world without consciousness (i.e., without “life,” as we now understand the word)—slight analogies put aside. In fact, we can begin to develop a more sophisticated definition of the concept of “pleasure,” in the broadest possible sense of the word, as follows: it is the common psychological element in all psychological experience of goodness (be it in joy, admiration, or whatever else). In this sense, pleasure can always be pictured to “mediate” all awareness or perception or judgment of goodness: there is pleasure in all consciousness of things good; pleasure is the common element of all conscious satisfaction. In short, it is simply the very experience of liking things, or the liking of experience, in general. In this sense, pleasure is, not only uniquely characteristic of life but also, the core expression of goodness in life—the most general sign or phenomenon for favorable conscious valuation, in other words. This does not mean that “good” is absolutely synonymous with “pleasant”—what we value may well go beyond pleasure. (The fact that we value things needs not be reduced to the experience of liking things.) However, what we value beyond pleasure remains a matter of speculation or theory. Moreover, we note that a variety of things that may seem otherwise unrelated are correlated with pleasure—some more strongly than others. In other words, there are many things the experience of which we like. For example: the admiration of others; sex; or rock-paper-scissors. But, again, what they are is irrelevant in an inquiry on a priori value—what gives us pleasure is a matter for empirical investigation. Thus, we can see now that, in general, something primitively valuable is attainable in living—that is, pleasure itself. And it seems equally clear that we have a priori logical reason to pay attention to the world in any world where pleasure exists. Moreover, we can now also articulate a foundation for a security interest in our life: since the good of pleasure can be found in living (to the extent pleasure remains attainable),[17] and only in living, therefore, a priori, life ought to be continuously (and indefinitely) pursued at least for the sake of preserving the possibility of finding that good. However, this platitude about the value that can be found in life turns out to be, at this point, insufficient for our purposes. It seems to amount to very little more than recognizing that our subjective desire for life in and of itself shows that life has some objective value. For what difference is there between saying, “living is unique in benefiting something I value (namely, my pleasure); therefore, I should desire to go on living,” and saying, “I have a unique desire to go on living; therefore I should have a desire to go on living,” whereas the latter proposition immediately seems senseless? In other words, “life gives me pleasure,” says little more than, “I like life.” Thus, we seem to have arrived at the conclusion that the fact that we already have some (subjective) desire for life shows life to have some (objective) value. But, if that is the most we can say, then it seems our enterprise of justification was quite superficial, and the subjective/objective distinction was useless—for all we have really done is highlight the correspondence between value and desire. Perhaps, our inquiry should be a bit more complex.

#### Their Simons link is talking about the fiscal aspects of capitalism – currency, sub-prime mortgages, the rate and costs of production – tech innovation is a symptom not a cause of this system – which means the permutation solves and their alternative can’t

Simons ’10

(Petrus, Former Trader and Economist, PhD in Philosophy, Accelerate or Slow Down, Stimulus: The New Zealand Journal of Christian Thought & Practice, Vol. 18 (2010): 32-25)

Our culture relies on science and technology as a means of solving... an increase in production, which is nothing but an appropriation of nature.

Our culture relies on science and technology as a means of solving all problems and a way of achieving economic growth. Our single-minded focus on the latter tends to mask our dependence on scientific technical innovation. The financial crisis, which erupted in 2007 and 2008 was caused, in part, by the application of highly complex technical financial instruments. By translating scientific technical progress, as understood, for example, by the Enlightenment thinker de Condorcet, in terms of limitless economic growth, we have embraced acceleration as a key principle.

A financial crisis

For years American banks had originated cheap, and, therefore, risky sub-prime mortgages. To minimise their risks they packaged and sold them via complex financial instruments such as Credit Default Swaps, invented by financial/mathematical engineers, to other banks around the world. Each sale generated fee income.

Hence, the demand for sub-prime mortgages accelerated. As house prices rose in response, bankers assured mortgagors that their debts were covered by the rising value of their houses.

Thus, people could climb ladders towards wealth. So, new houses were built in large numbers. The sky appeared to be the limit. Until one day the bubble burst, house prices fell and mortgagors could not service their debts. Since banks hardly knew what liabilities they had incurred by dealing in the fancy parcels, they lost trust in each other, becoming extremely cautious. As the world’s credit machinery stalled, the crisis widened to virtually all economic sectors. As a result of globalisation policies, jobs are now being eliminated at a fast pace around the globe. Governments and central bankers have tried to stop the rot by spending huge amounts on bailing out banks, without quite knowing how their actions will pan out.

This is serious because modern capitalism is driven by interest rates. Interest can only be paid if capital investment keeps growing. If banks stop providing credit, expansion ceases, turnover declines and unemployment rises.

Acceleration: speed, change, and tempo

Rosa has de-composed the concept of acceleration into three inter-related elements:

1. Technical acceleration, meaning that more can be done per unit of time;

2. Rates of change of production per unit of time;

3. Higher tempo of life due to more activity per unit of time.1

The introduction of e-mail has made it possible to send a great many more messages per day than was possible previously. This could save us a great deal of time (1). However, we now have to cope with a considerable increase in the volume of messages per day (2). Not only that, but we are also required to answer many messages on the day they arrive (3). The growth in speed coupled with increased activity has forced up the tempo of life. Applying these distinctions to the financial crisis, we know that computers and the Internet have enabled banks not only to write many more mortgages per unit of time, but also to package and sell them at vast speeds. The volume of business rose strongly. As a result, control systems failed, managers enjoyed high salaries and bonuses, but lacked the time to manage properly, also because of the opaque complexity of new instruments. The dromo-sphere The financial crash is an instance of our living in a dromo-sphere, a sphere which is marked not only by time and place, but also by speed, as Paul Virilio likes to describe our modernity.2 He focuses particularly on the first form of technical acceleration, in Rosa’s scheme, and the consequences thereof. In this way, he shows a remarkable insight into technicism, as defined by Egbert Schuurman: Technicism is the pretension of humans, as self-declared lords and masters using the scientific-technical method of control, to bend all of reality to their will in order to solve all problems, old and new, and to guarantee increasing material prosperity and progress. 3

THEIR CARD BEGINS

Paul Virilio’s metaphor of a car which travels at high speed is very apt. The driver sees trees ahead coming towards the windscreen and disappearing again through the rear mirror. It is as if the environment outside is moving, whilst the car is stationary. The ever increasing speed of our transport and communication media distorts our view of the world around us. It tempts us to demand more and more of the world’s resources as if they are infinite. We ignore the massive volumes of energy required and the pollution caused by our speed. Instead of reducing the maximum speed so as to stop the slaughter of humans, we make the roads more suitable for the speed we desire. Sharp bends are straightened and land, cultivated for centuries to produce food, converted to motorways.4 (Shiva, 2008, 63ff). Since barriers to trade would slow down the flows of goods and services, thereby making large capitalintensive transport equipment lose money, they should be abolished. The more trade is free, the better we can compete, raising the rate of technical progress and economic (monetary) growth. It is assumed that there will always be plenty of raw materials and energy to construct an ever growing number of technical objects. Yet, states are prepared to equip armies and use finance to secure adequate supplies of oil and gas. Even an age-old activity such as agriculture is drawn into the speed of the dromo-sphere. New varieties, better (chemical) fertilisers and sprays, fast tractors, growth-hormones (not allowed in New Zealand) and antibiotics should accelerate the speed of production. The speeding dromosphere collides with the kingdoms of minerals, plants and animals, which tend to change, but slowly over long periods of time. It took millions of years for oil to accumulate in sandstone formations. We have been pumping it out within 200 to 250 years, thereby causing climate warming and a destruction of landscapes. As the 21st century wears on, we will experience ever more painfully that speed kills.

THEIR CARD ENDS

 How did we become so foolish? The German poet Johann Wolfgang von Goethe (1749-1832) had an inkling around 1800, after the start of the industrial revolution, that things would never be the same again. Goethe’s Faust: the modern economy as alchemy For our purposes the second part of Faust, published after the author’s death, in 1832, is the more significant. In it (also in part I) Goethe relied on key ideas of alchemy, including: Using the stone of the wise, or the fifth element, the quintessence, to transform ordinary metals such as lead, a symbol of what is perishable, into imperishable noble metals. With their oven alchemists attempted to shorten periods of millions of years in nature to a few weeks. Materials die and rise again in order to turn into gold eventually. Gold was seen as the primary material, meaning that parts of it were present in all other materials. It would break through the limits of time with a material result (wealth and health) as well as an immaterial meaning (the gold of the immortal soul). The alchemists searched for the elixir of life to remain young and healthy forever. Making gold as means of payment that would keep its purchasing power forever was another goal. As the New Age of the Renaissance and Enlightenment unfolded the material pursuit became ever more important than the spiritual. A fascinating aspect is that alchemists did not accept a basic difference between organic and an-organic or between dead and living substances. In the state of original chaos there was only life.5 Mephistopheles, representing an alchemist, suggests to the Emperor, who is in financial straits, that he should print paper money and that such paper would be backed by the treasures hidden in the soil: copper, gold, silver, etc. But how could such paper money be of lasting value? Just consider it as capital issued in the form of debt. As debts get repaid and loans rolled over, it can last for as long as one likes. Paper money allows production to grow steadily. Goethe suggests, therefore, that modern economics is a piece of magic, according to Binswanger. In contrast, the theory of economic growth emphasises only capital and technological progress, both human efforts, as key factors. Nature is absent from it. In Faust II money puts gnomes to work to mine ore, needed to realise Faust’s colonisation project, the reclamation of land from the sea. The energy required is represented by the fire that keeps the steam engines going. The needs of the new colony are such that ships have to bring treasures from overseas. Trade is essential to obtain all the materials called for to create surplus value. Binswanger lists all the factors of magic at work in Faust’s great project: • imagination to use paper money; • the state’s power to legitimise paper money; • human motivations to create property: violence, greed and honour; • the acceleration of speed (by means of infrastructure); • enhancement of productive powers by non-human energy; • technical progress. Monetary capital value is the quintessence, the fifth element, that should enhance the value of the earth’s treasures, the prime material of the alchemic process. We measure the value of work of so-called real capital in terms of money. Such a catalyst should be able to increase the value of the treasures unearthed. It does this by means of interest and profit, which may be reinvested. However, interest and profit only materialise when income exceeds costs. By the creation of credit new opportunities for generating income arise, as explained above. Interest payable should be covered by an increase in production, which is nothing but an appropriation of nature.

#### Their Goldman evidence is talking about advertisement narratives – when he references a “landscape of risk” he doesn’t mean that that a crash will actually happen, he means that the corporate narrative is, “if you don’t buy our product your business could crash”

Goldman et al. ‘6

(Robert Goldman, Stephen Papson, Noah Kersey, Landscapes of the Social Relations of Production in a Networked Society, Fast Capitalism 2.1, http://www.uta.edu/huma/agger/fastcapitalism/2\_1/SocialRelations.html)

As a corollary to re-visioning class formations, the over 2,065 TV ads we’ve studied rarely represent any relationship between classes or class actors. Fragmented glimpses of figures who are marked as possessing a class position are either narrated without the frame of class as a category, or keep such figures isolated. And as Hegel long ago reminded us, a master is not a master without a slave to recognize him as such. It is not surprising that images of the world poor are mostly absent from the landscapes of corporate advertising. When the poor do appear, it is to demonstrate that human dignity has not been forgotten and that corporations like Philip Morris, American Express or Occidental Petroleum care about people and empathize with profound human suffering. The poor, as we shall see, retain this semiotic functionality in how capitalism is represented in its own media.

While the poor are rarely depicted in television advertising, capitalist elites are not quite named as such either. This does not mean that corporate executives are invisible, but that questions regarding their social and economic rank and clout are kept blurry. It is frequently difficult to tell if a corporate executive is supposed to be a CEO, a vice president, or a manager. Few campaigns specify or differentiate functional responsibilities within the corporate hierarchy.[1] When real CEO’s appear, as in NASDAQ ads, they are positioned as dynamic dreamers who recount with excitement, passion, and authority their pioneering places at the center of the new capitalist universe for the 21st century. Along with professing infinite faith in the entrepreneurial path that has enabled them to gain wealth and success, translating visions into reality, they reiterate a litany of motivational maxims (e.g., “Success is not an entitlement, it has to be earned”) that are intended to articulate a future of global capitalism composed by companies that have just “scratched the surface of what’s really possible.”

The NASDAQ ads reveal more, however, than intended. Establishing the visionary character of corporate leaders who possess a “passion” for realizing their visions, the ads play to a mythology of the new economy -- successful companies depend on leaders who are innovative, inspirational, and have a courageous “entrepreneurial spirit.” In these representations, the CEO’s are the companies; they have engineered productive facilities that are devoid of workers. The leading edge of contemporary capitalism seems to be constituted by companies defined by passionately engaged, forward-thinking leaders, automated technologies, and products. This campaign hails the champions of the new economy, where the lion’s share of rewards go to celebrity players, the “visionaries,” while everyone else gets downsized, and once out of sight are also out of mind.

The NASDAQ ads are particularly instructive in narrating the linkage between philosophy of corporate organization and motivation that drives the leaders of Dell, Starbucks, Microsoft, Cisco, Staples and Intel. Similarly, Carly Fiorini, the first female CEO of a Fortune 100 company, took the stage in HP ads to narrate the philosophy of a firm rededicating itself to its roots in the “radical simplicity” of entrepreneurial invention and innovation. When Michael Dell, founder and CEO of Dell Computer, appeared in behalf of his company, the only allusion to his power was signified by the way he surveys the world through the window atop his company’s grand architectural monument. In no instance, do these powerful corporate leaders speak of gaining wealth or fame or power, but rather of contributing to a “greater good.”

"I like to think of myself as an Innovator who started a company - Dell Computer - around an idea that everybody should be doing business directly with one another. One to one - with no barriers. To me that’s the power of the Internet. We’d like to show you how to empower your business in ways you’d never imagine. I’m Michael Dell and it’s our reason for being.”

His self-presentation as an innovator seeking to harness the power of an idea that serves to empower others rather than enriching himself suggests a new kind of world-historical elite that seeks not to preserve its own power but revolutionize the social relations of production to make everyone an owner and everyone a winner.

Fictional CEO’s sometimes appear in “sign war” ads shaped by a humorous tone. Such ads seek to devalue the credibility of competitors. Here, fictional CEO’s tend to be the other company’s CEO’s - they may be pompous windbags (e.g., XO), ball-busting tyrants (UPS), or ignorant and incompetent executives (EDS). Though such representations are usually facetious in tone, they nonetheless present the other side of the capitalist corporation -- mistrust, abuse of power, incompetence, poor leadership, greed, insincerity, and a lack of innovation.

Television images of corporate executives also include glancing shots of them directing fiefdoms, issuing directives, demonstrating resolve, applying new technologies, jetting around the world, and reaping luxurious rewards. But by ghettoizing the “functionaries of capital” to a world of corporate towers, jet planes, haute architecture, and exotic resort hotel settings, these television images reveal no sense that a global underclass might be expanding or that the middle class might be eroding as a result of how Capital is expanding.

Michael Dell’s pose as he surveys the world from the oversized window of his executive suite reminds us of Roland Marchand’s observation that from the 1920s through the 1950s a recurring visual trope in ads was the executive gaze from atop a corporate tower. While such surveying gazes remain a signifier of commanding presence, today we are also apt to see corporate executives on the move. Through streets lined with corporate towers, through buildings, up stairs, escalators and elevators, through airports, in jets and on helicopters, executives symbolize dynamic capital, purposively and peripatetically in pursuit of the highest returns on investment.

A customary signifier of dynamic capital is suggested by tightly edited scenes of feet moving across floors, up stairs, through corridors, and sometimes even around the globe. Intercut into financial narratives, these signifiers of dynamic movement combine with the conventions of photography to connote power, purpose, determination and direction. Executives are often shot from low angle, a cinematic device that gives the figure a dominating presence in the frame. At other times executives are placed on high, suggesting superiority, vision, knowledge, and success. Scenes of executives striding in formation, flanked by aides and subordinates connote a sense of decisiveness and determination on missions that abstractly move toward achieving goals like mergers, takeovers, and lucrative contracts. The wingtip shoe is so clearly marked as a signifier of power that a Morgan Stanley Dean Witter ad uses the device of the shoeshine stand to play up the idea that Capital no longer discriminates against women as it includes a woman’s high heel in the “new old boy’s club.” [2]

THEIR CARD BEGINS

The formula for success is knowledge, power, mobility, and determination. Situated in positions of power, the corporate elite imagistically embody these attributes -- they are active, informed, determined, focused, surrounded by technology. Even when the body is not moving, information continues to flow via cell phones and electronic information tools integrated into the scenes. Embodied in pinstripes, wingtips, and the other accoutrements of power, these scenes suggest that markets may be volatile but capital is composed and disciplined in its pursuit of opportunities. Nowhere is this scenario more graphically played out than in the 1999 ad campaign for Salomon Smith Barney that reveals a world moving at warp speed while the elite investment bankers calmly survey it as they spot the “opportunities” that will pay off.

These representations resemble what Thomas Friedman (1999) dubs the “Electronic Herd” in The Lexus and the Olive Tree. His metaphor embraces the volatility of markets in conjunction with the diffusion of capital across the electronic circuits of finance. According to Friedman, no corporation or nation-state can risk losing the favor of the Herd. In the global economy this can be catastrophic to market values. Those who comprise the Herd compete to maximize the rate of return on investments, which translates into manically scouring the planet for opportunities or cutting losses as quickly as possible when it is time to sell. The manic need to invest is matched by panic selling. Combined with the ability to transfer funds and monies electronically, a stock can be cut in half in hours, or a country’s currency thrown into crisis with a rapidity hitherto unknown.

Friedman’s metaphor of the electronic herd pictures an economic elite dashing about in a global free market economy fueled by technological innovation and the liquidity of capital forms (currency, stocks, commodities). The figures who compose this grouping are constructed as dynamic, mobile, and technologically sophisticated. They fluidly traverse the world of nonplaces and occupy office suites in corporate towers surrounded by personal communication technologies. And yet, even in these idealized abstractions, uncertainties and anxieties seep through. Narratives of success are sprinkled with hints of impending crisis, or stories of those who made the wrong choices - the wrong office equipment, the wrong software, the wrong package delivery service. The exhilaration associated with accelerated social, economic, and technological change mixes with an undercurrent of apprehension. Speed may mean winning, but it can also lead to crashing. There are more losers than winners in casino capitalism. The landscape of risk is omnipresent.

THEIR CARD ENDS

True grit - The Persistence of Bourgeois Maxims in the Age of Globalization

In spite of dramatic changes evident with the transition to global capitalism - internet networks, the stress on speed, the demise of place in favor of the flow of spaces, the decline of old fashioned virtues such as aversion to debt in favor of the stress on the necessity of consumerism - the rhetoric of motivation remains unchanged. Corporate ads still sound like the fictional success stories so popular in the late nineteenth century - like the Horatio Alger stories with their emphasis on individual pluck and determination. The further corporations drift toward concentration and consolidation, the more they seem to fall back on the work ethic and its associated ideological maneuvers.

We have seen that new rules, new tools and new relationships mark off the depiction of a new business paradigm in corporate advertising. And yet, no matter what else changes in the landscapes of capital, the ideology of motivation and success continues to rely on the moral maxims of the work ethic. A 2004 Smith Barney campaign hails the work ethic as the basis of business success. Employing the serial monologue, multiple executives delineate the key terms of their work ethic, as if they speak in a unified discourse. A key difference between this enunciation and that performed by their bourgeois precursors is that it’s no longer the sole domain of Anglo males - the old fashioned work ethic is now an equal opportunity ethic that draws race, gender and ethnicity under the same umbrella. The Smith Barney ad opens by superimposing a white male over the financial landscape to suggest power, knowledge and determination. This is followed by quick cutting close-ups of Smith-Barney people on the move, each of whom address directly with confidence and conviction about what is required for success - theirs is the language of motivational clichés. There are no slackers here. They have been weaned out. Neither is there any secret of success, but rather a series of old-school motivational homilies about the values and practices of preparation, elbow grease, stubborn determination, will, dedication.

**The pragmatic process of power generation is key – effective transition away from fossil fuels requires discussion of practical alternatives and willingness to support corporate production of energy**

**Monbiot 11**

(George, columnist for The Guardian, has held visiting fellowships or professorships at the universities of Oxford (environmental policy), Bristol (philosophy), Keele (politics), Oxford Brookes (planning), and East London (environmental science), March 31, “The double standards of green anti-nuclear opponents", http://www.guardian.co.uk/environment/georgemonbiot/2011/mar/31/double-standards-nuclear)

Like most environmentalists, I want renewables to replace fossil fuel, but I realise we make the task even harder if they are also to replace nuclear power. I'm not saying, as many have claimed, that we should drop our concerns about economic growth, consumption, energy efficiency and the conservation of resources. Far from it. What I'm talking about is how we generate the electricity we will need. Given that, like most greens, I would like current transport and heating fuels to be replaced with low-carbon electricity, it's impossible to see, even with maximum possible energy savings, how the electricity supply can do anything other than grow. All the quantified studies I have seen, including those produced by environmental organisations, support this expectation. **Ducking the challenge of how it should be produced is not an option**. Nor have I changed my politics (and nor for that matter am I an undercover cop, a mass murderer, a eugenicist or, as one marvellous email suggested, "the consort of the devil"). In fact it's surprising how little the politics of energy supply change with the mass-generation technology we choose. Whether or not there is a nuclear component, we are talking about large corporations building infrastructure, generating electricity and feeding it into the grid. My suspicion of big business and my belief that it needs to be held to account remain unchanged.

**Economics of speed is key to neolib – maintains tek innovation and creates efficiency**

**Giaretta ‘5**

(Elena, Associate Professor in Economics @ University of Verona, “Ethical Product Innovation: In Praise of Slowness”, TQM Magazine, Vol. 17 No. 2, 2005)

There are after all **many advantages associated with such company conduct**, both from the point of view of the business and that of the customer. From the company’s viewpoint there may be significant **improvements in terms of efficiency** (less design time and costs), as well as efficacy (in terms of the ability to reach the customer in the planned time scale and before competitors). Most of the **systems worked out to reduce the times for any determined action** in fact move in this direction: take for example the automatic teller machine, the highway Telepass, the locomotives placed at each end of the train, the doubling of a railway line and the reduction of “dead time” in the factory. The importance of the competitive advantage thusgained[30] has **led some writers to talk of the “economies of speed**”[31], i.e. the advantages deriving from the ability to make innovative choices and adopt new behaviour faster than the competition and thus determine the speed at which the continuous innovation is running. From the customer’s perspective, **continuous product innovation may also result in equally significant benefits insofar as it tends to lead to the better satisfaction of his ever-higher expectations**. This would seem to be all the more likely the more involved the customer is in the product planning stage, favouring the incorporation of his own knowledge into the products.

**No transition – institutional complexity and impersonal nature of systems cause cultural assimilation – only growth can solve social conflict**

**Barnhizer, 6**

David, Prof of Law, Cleveland State U, ‘Waking from Sustainability's "Impossible Dream”,’ Geo Int’l Envtl L Rev, pg. l/n

Devotees of sustainability pin their hopes on an awakening by an enlightened populace that will rise up and insist that business and government behave in ways that reflect the idea that "[a] sustainable society is one that can persist over generations, one that is far-seeing enough, flexible enough, and wise enough not to undermine either its physical or its social systems of support." [n81](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.714257.8466500462&target=results_DocumentContent&reloadEntirePage=true&rand=1231738964826&returnToKey=20_T5507732879&parent=docview#n81) **This awakening is not going to happen**. There will never be a populist revolution in the way humans value the environment, social justice, and other matters of moral consequence. We frequently "talk the talk," but rarely "walk the walk." [n82](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.714257.8466500462&target=results_DocumentContent&reloadEntirePage=true&rand=1231738964826&returnToKey=20_T5507732879&parent=docview#n82) This discrepancy is partly an individual failure, but it is even more a result of the powerful forces that operate within our culture. Residents of Western cultures are shaped by the system in which they live. They will never possess either the clarity of agenda or the political will essential to a coherent and coordinated shift in behavior due to a combination of ignorance, greed, sloth, and inundation by political and consumerist propaganda. This combination means there will be no values shift welling up from the people and demanding the transformation of our systems of production and resource use. Paul Tournier captured the essence of the cultural forces when he observed: [People] have become merely cogs in the machine of production, tools, functions. All that matters is what they do, not what they think or feel. . . . [T]heir thoughts and feelings are . . . molded by propaganda, press, cinema and radio. They read the same newspaper each day, hear the same slogans, see the same advertisements. [n83](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.714257.8466500462&target=results_DocumentContent&reloadEntirePage=true&rand=1231738964826&returnToKey=20_T5507732879&parent=docview#n83)Feeling helpless in the face of inordinate complexity and vast impersonal forces causes us to flee from our **personal responsibility** and become absorbed into the systems of institutions. The price of the required allegiance includes accepting (or appearing to accept) the institution's values as our own. We become a contributing part of the same system that oppresses us and **steals our humanity and idealism**. This assimilation allows us to avoid the harshest application of the system's power while reaping the rewards of collaboration. We become, in the  [\*629]  words of Pink Floyd, "just another brick in the wall." [n84](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.714257.8466500462&target=results_DocumentContent&reloadEntirePage=true&rand=1231738964826&returnToKey=20_T5507732879&parent=docview#n84) When we attempt to talk about the need to do such things as internalize costs that are now allowed to remain external to the entities generating the harms and shifting to a system of low or no impact on the Earth's natural systems, we are talking about fundamental, non-voluntary changes in entitlements and lifestyle. Even Alan Greenspan drew severe criticism when he recently suggested that social security benefits should be reduced. [n85](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.714257.8466500462&target=results_DocumentContent&reloadEntirePage=true&rand=1231738964826&returnToKey=20_T5507732879&parent=docview#n85) Jacques Chirac's party in France has seen its public support plummet due to efforts to reduce social spending. [n86](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.714257.8466500462&target=results_DocumentContent&reloadEntirePage=true&rand=1231738964826&returnToKey=20_T5507732879&parent=docview#n86) Germans have taken to the streets in the hundreds of thousands to protest their leaders' efforts to develop plans to gain control of the German welfare state. [n87](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.714257.8466500462&target=results_DocumentContent&reloadEntirePage=true&rand=1231738964826&returnToKey=20_T5507732879&parent=docview#n87) It is impossible to generate the political will that would be required to change the system we have constructed into one that satisfies the demands of sustainability. This is not surprising because the clear message is that we **need economic growth**. The situation we face is akin to Bangladesh where I was part of a group urging the country's Planning Minister to take potential environmental harms and ecosystem impacts into greater account in his planning. He responded that the ideas were admirable in theory but that he had to worry about generating jobs and food for 160 million people. He indicated that while he respected the arguments for sustainability his more immediate needs were to ensure jobs and food for Bangladeshis. In a similar context, while teaching international environmental law in St. Petersburg, Russia, my discussion with Russian academic colleagues related to water pollution in the area, radioactive materials dumping, and the raw air pollution from Lada cars running on 76 octane gasoline and other uncontrolled emitters of air pollution that fouled the air of this most beautiful city. At the end of the course one of my Russian colleagues said, "I found it all fascinating. But you know we have other problems with which we must deal before we can begin to worry about the environment. Perhaps in fifteen years or so we will be ready." I found myself unable to disagree with the speakers in either Bangladesh or Russia. Return to the idea of our inability to generate the political will that would be required to achieve fundamental change if we decided that the Agenda 21 type of sustainable development ideas were good social and economic strategies. Even if  [\*630]  they were desirable, they are "impossible dreams" because the people and institutions who set policy and decide on actions in the business and governmental arenas will never accept them as guides for behavior or as requirements for decisionmaking. This impossibility exists because we are not free and independent individuals but creatures of habit, dominated by the culture in which we exist. We desire to behave according to the dictates of the powerful systems that govern our lives and culture.

**Even if they win discourse first, you should evaluate impacts within the framework of neoliberal knowledge production – market relations are *stable* social constructions that people *assume to be true* – only using them as a starting point is politically productive**

**Jones & Spicer ‘9**

(Campbell, Senior Lecturer in the School of Management at U of Leicester, Andre, Associate Professor in the Dept of Industrial Relations @ Warwick Business School U of Warwick, Unmasking the Entrepreneur, pgs. 22-23)

The third strand in our proposed critical theory of entrepreneurship involves questions of the 'extra-discursive' factors that structure the context in which these discourses appear. The result of privileging language often results in losing sight of political and economic relations, and for this reason, a turn to language and a concomitant disavowal of things extra-discursive have been roundly criticised (Ackroyd and Fleetwood, 2000; Armstrong, 2001; Reed, 1998,2000,2009). An analysis of discourse cannot alone account for the enduring social structures such as the state or capitalism. Mike Reed has argued that a discursive approach to power relations effectively blinds critical theorists to issues of social structures: Foucauldian discourse analysis is largely restricted to a tactical and localised view of power, as constituted and expressed through situational-specific 'negotiated orders', which seriously underestimates the structural reality of more permanent and hierarchal power relations. It finds it difficult, if not impossible, to deal with institutionalised stabilities and continuities in power relations because it cannot get at the higher levels of social organisation in which micro-level processes and practices are embedded. (Reed, 2000: 526-7) These institutional stabilities may include market relations, the power of the state, relations like colonialism, kinship and patriarchy. These are the 'generative properties' that Reed (1998: 210) understands as 'mak(ing) social practices and forms - such as discursive formations - what they are and equip(ing) them with what they do'. Equally Thompson and Ackroyd also argue that in discourse analysis 'workers are not disciplined by the market, or sanctions actually or potentially invoked by capital, but their own subjectivities' (1995: 627). The inability to examine structures such as capitalism means that some basic forms of power are thus uninvestigated. Focusing solely on entrepreneurship discourse within organisations and the workplace would lead to a situation where pertinent relations that do not enter into discourse are taken to not exist. Such oversights in discursive analyses are that often structural relations such as class and the state have become so reified in social and mental worlds that they disappear. An ironic outcome indeed. Even when this structural context is considered, it is often examined in broad, oversimplified, and underspecified manners. This attention to social structure can be an important part of developing a critical theory of entrepreneurship, as we remember that the existing structural arrangements at any point are not inevitable, but can be subjected to criticism and change. In order to deal with these problems, we need to revive the concept of social structure. Thus we are arguing that 'there exist in the social world itself and not only within symbolic systems (language, myths, etc.) objective structures independent of the consciousness and will of agents, which are capable of guiding and constraining their practices or their representations' (Bourdieu, 1990: 122). Objective still means socially constructed, but social constructions that have become solidified as structures external to individual subjects. Examples of these structures may include basic 'organising principals' which are relatively stable and spatially and historically situated such as capitalism, kinship, patriarchy and the state. Some entrepreneurship researchers, particularly those drawing on sociology and political science, have shown the importance of social structure for understanding entrepreneurship (see for example Swedberg, 2000).

**Economic rationality is ethical and solves war – self-interest motivates individuals to sacrifice some autonomy to produce security and protect the rights of others**

**Aasland ‘9**

(Dag, Prof. of Economics @ U of Agder, Norway, Ethics and Economy: After Levinas, pgs. 65-66)

Business ethics, in the sense of ethics *for* business, illustrates this: its perspective is that of an ‘enlightened self-interest’ where the constraints that are put on the individual, thanks to the ability to see the unfortunate consequences for oneself, postpone the ‘war’, in a direct or metaphoric sense of the word (*ibid.*: 70-71). This enlightened self-interest forms the base not only of the market economy, but also of a social organization and manifestation of human rights, and even of some ethical theories. It is a calculated and voluntary renunciation of one’s own freedom in order to obtain in return security and other common goals (*ibid.*: 72). The fact that economic, political and legal theories appeal to enlightened self-interest does not imply, however, that we should discard them. Nor should we reject proclamations of human rights, legal constraints of individual freedom and, for that matter, business ethics, even if they are based on an enlightened self-interest. It is rather the opposite: such institutions and knowledge are indispensable because the primary quality of the enlightened self-interest is that it restricts egocentricity.fdf Our *practical reason* (which was Kant’s words for the reason that governs our acts, where the moral law is embedded as a principle) includes the knowledge that it can be rational to lay certain restrictions on individual freedom. In this way practical reason may postpone (for an indefinite time) violence and murder among people. This has primarily been the raison-d’être of politics and the state, but it is today taken over more and more by corporate organizations, as expressed in the new term for business ethics, as *corporate social responsibility* and *corporate citizenship* (see chapter 2). Thanks to this ‘postponement of violence’ provided by politics and economic rationality, people may unfold their freedom within the laws and regulations set up by society (Burggraeve, 2003: 77).

**Permutation do both**

**No alternatives to neoliberalism are possible – only the perm solves**

Ben **Fine** **and** David **Hall**. **No Date**.Terrains of neoliberalism: Constraints and opportunities for alternative models of service delivery. <http://eprints.soas.ac.uk/13588/1/fandhall.pdf>

The purpose of this chapter is not so much to demonstrate that neoliberalism is suffering some degree of crisis of legitimacy as it is to explain ¶ why, **despite this crisis, the momentum behind alternatives to neoliberalism ¶ remains so weak.** There are good reasons for this, reflecting the extent to ¶ which **neoliberalism is not merely an ideology and a set of policies to be ¶ reversed but is systemically attached to developments across contemporary ¶ capitalism over the past 30 years that have been underpinned by, but cannot be reduced to, what has been termed “financialization**”.¶ We begin by giving an account of financialization – what it is, what are ¶ its effects and what challenges it poses to alternative policy making. Of ¶ course, to point to financialization is not to blame finance or the economy ¶ for all of the world’s woes, even if this is in part an understandable reaction ¶ to the current crisis. For **neoliberalism is not simply confined to economic ¶ imperatives but has also reflected, for example, responses to the collapse of ¶ the Soviet bloc, the erosion of the vitality and strength of trade unions and ¶ liberation struggles, and the perceived failings of the (welfare) state following the collapse of the post-war boom.**¶ Financialization has, then, involved the excessive expansion and proliferation of financial markets and their penetration into, and influence over, ¶ almost every area of economic and social life. But this has occurred against ¶ a broader and deeper background of changes that have been systemically ¶ disadvantageous to public sector provision. The systemic hold of neoliberalism explains why proposals for public sector alternatives have been so ¶ thin on the ground and also why those that do prevail against the odds ¶ should be constrained from meeting wider goals than commercial viability. The institutional capacity to deliver public sector alternatives has been ¶ severely undermined so that even corresponding proposals remain limited, ¶ let alone delivery in practice.¶ As will be shown, these observations are borne out in acute form by ¶ the financial crisis that began in 2008 and the policy responses to it. The ¶ imperative to rescue the financial system from itself begs the question of ¶ “rescue it for what and how”, and here there tends to be a yawning gap in real outcomes, especially in public provision, reflecting the extent to which ¶ policy has been geared towards supporting the private sector in general and ¶ finance in particular. This leads us to suggest that **the building of public ¶ sector alternatives, on which the vast majority of the poorest in developing countries will continue to depend for provision of many of their basic ¶ needs into the foreseeable future, will have to dovetail with the building ¶ of broader policy initiatives and institutional capacity to deliver them. It ¶ is not, then, simply a matter of different policies and of a different politics ¶ that informs them. The most immediate, but far from final, task is one of ¶ placing finance at the service of delivery rather than the other way about.**

**Neolib solves war and collapse causes it – historical evidence and studies prove**

**Tures ‘3 – Associate Professor of Political Science @ LaGrange College**

John A. Tures, Associate Professor of Political Science at LaGrange College, 2003, “ECONOMIC FREEDOM AND CONFLICT REDUCTION: EVIDENCE FROM THE 1970S, 1980S, AND 1990S”, Cato Journal, Vol. 22, No. 3. http://www.cato.org/pubs/journal/cj22n3/cj22n3-9.pdf

The last three decades have witnessed an unprecedented expansion of market-based reforms and the profusion of economic freedom in the international system. This shift in economic policy has sparked a debate about whether free markets are superior to state controls. Numerous studies have compared the neoliberal and statist policies on issues of production capacity, economic growth, commercial vol- umes, and egalitarianism. An overlooked research agenda, however, is the relationship between levels of economic freedom and violence within countries. Proponents of the statist approach might note that a strong gov- ernment can bend the market to its will, directing activity toward policies necessary to achieve greater levels of gross domestic product and growth. By extracting more resources for the economy, a pow- erful state can redistribute benefits to keep the populace happy. Higher taxes can also pay for an army and police force that intimidate people. Such governments range from command economies of totali- tarian systems to autocratic dictators and military juntas. Other eco- nomically unfree systems include some of the authoritarian “Asian tigers.” A combination of historical evidence, modern theorists, and statis- tical findings, however, has indicated that a reduced role for the state in regulating economic transactions is associated with a decrease in internal conflicts. Countries where the government dominates the commercial realm experience an increase in the level of domestic violence. Scholars have traced the history of revolutions to explain the relationship between statism and internal upheavals. Contemporary authors also posit a relationship between economic liberty and peace. Statistical tests show a strong connection between economic freedom and conflict reduction during the past three decades.

**The global economy is not zero-sum – technical communities facilitate a process of reciprocal industrial upgrading that produces integrated supply chains and collaborative advantage**

Saxenian 2007. (AnnaLee, Dean, School of Information, UC Berkeley The New Argonauts: Regional Advantage in a Global Economy)

A cross-regional technical community allows distant producers to specialize and collaborate to upgrade their capabilities, particularly when the collaborations require intense communications and joint problem solving. The trust and local knowledge that exist within technical communities, even those that span continents, provide a competitive advantage in an environment where success depends on being very fast to market with new products. Rather than competing for a relatively fixed market, these specialists are jointly growing their markets by introducing new products, services, and applications. As a result, while the relationship deepens over time, they can remain complementary and mutually beneficial rather than zero-sum. Entrepreneurship is risky by definition. Even in the best circumstances, a majority of start-ups fail or grow very slowly. However, regions like Taiwan and Israel have created systems of entrepreneurial growth that encourage start-ups and increase the likelihood of business success. Entrepreneurs actively reshape the local environment as they grow their firms by supporting one another by working to influence policy. Success reinforces success in these regions, as spin-offs from successful companies define new markets and technological pathways while also providing training grounds and role models for subsequent entrepreneurs.

**And it solves the impact – Tech diffusion creates international resilience to hypernationalism and war**

Zakaria – Editor of Newsweek International, Editor At Large of Time, BA Harvard– ‘9
Fareed, The Secrets of Stability, December, <http://www.newsweek.com/2009/12/11/the-secrets-of-stability.html>

This diffusion of knowledge may actually be the most important reason for the stability of the current system. The majority of the world's nations have learned some basic lessons about political well-being and wealth creation. They have taken advantage of the opportunities provided by peace, low inflation, and technology to plug in to the global system. And they have seen the indisputable results. Despite all the turmoil of the past year, it's important to remember that more people have been lifted out of poverty over the last two decades than in the preceding 10. Clear-thinking citizens around the world are determined not to lose these gains by falling for some ideological chimera, or searching for a worker's utopia. They are even cautious about the appeals of hypernationalism and war..

## 1AR

### Econ of Speed

### Epistemology

#### Paradigm wars are useless – combining epistemologies is key to intellectual and political progress. Only the perm solves.

David A. Lake. 2011. Jerri-Ann and Gary E. Jacobs Professor of Social Sciences and Distinguished Professor of Political Science at the University of California, San Diego. Why “isms” are Evil: Theory, Epistemology, and Academic Sects as Impediments to Understanding and Progress. International Studies Quarterly 55, 465-480.

As I began, our task as scholars is to understand better the world in which we live. Our privileged position as scholars in society rests upon this goal, or at least its pursuit. We do not produce understanding by ﬁghting theological wars between ourselves at either the theoretical or epistemological levels. Rather, we achieve understanding by asking questions about important phenomena that we do not now understand well, employing appropriate theories to answer these questions, and then being honest with ourselves and others about the strengths and weaknesses of the evidence we have been able to bring to bear. Today, no single theoretical or epistemological approach deserves hegemony. Diversity of theory and method is necessary, at least at this stage of our intellectual development. Intellectual monocultures are rightfully feared. But the current cacophony is not what we should aspire to. Rather than useful debate we have turned inward to self-contained research traditions and epistemologies and, in turn, we focus on ﬁrst principles. Intellectual progress does not come from proclaiming ever more loudly the superiority of one’s approach to audiences who have stopped listening. Let’s end the theological crusades and seek progress in understanding real problems of world politics. Perhaps then we will earn the privileges society has accorded us.

### Policy 1st

**Even if they win discourse first, you should evaluate impacts within the framework of neoliberal knowledge production – market relations are *stable* social constructions that people *assume to be true* – only using them as a starting point is politically productive**

**Jones & Spicer ‘9**

(Campbell, Senior Lecturer in the School of Management at U of Leicester, Andre, Associate Professor in the Dept of Industrial Relations @ Warwick Business School U of Warwick, Unmasking the Entrepreneur, pgs. 22-23)

The third strand in our proposed critical theory of entrepreneurship involves questions of the 'extra-discursive' factors that structure the context in which these discourses appear. The result of privileging language often results in losing sight of political and economic relations, and for this reason, a turn to language and a concomitant disavowal of things extra-discursive have been roundly criticised (Ackroyd and Fleetwood, 2000; Armstrong, 2001; Reed, 1998,2000,2009). An analysis of discourse cannot alone account for the enduring social structures such as the state or capitalism. Mike Reed has argued that a discursive approach to power relations effectively blinds critical theorists to issues of social structures: Foucauldian discourse analysis is largely restricted to a tactical and localised view of power, as constituted and expressed through situational-specific 'negotiated orders', which seriously underestimates the structural reality of more permanent and hierarchal power relations. It finds it difficult, if not impossible, to deal with institutionalised stabilities and continuities in power relations because it cannot get at the higher levels of social organisation in which micro-level processes and practices are embedded. (Reed, 2000: 526-7) These institutional stabilities may include market relations, the power of the state, relations like colonialism, kinship and patriarchy. These are the 'generative properties' that Reed (1998: 210) understands as 'mak(ing) social practices and forms - such as discursive formations - what they are and equip(ing) them with what they do'. Equally Thompson and Ackroyd also argue that in discourse analysis 'workers are not disciplined by the market, or sanctions actually or potentially invoked by capital, but their own subjectivities' (1995: 627). The inability to examine structures such as capitalism means that some basic forms of power are thus uninvestigated. Focusing solely on entrepreneurship discourse within organisations and the workplace would lead to a situation where pertinent relations that do not enter into discourse are taken to not exist. Such oversights in discursive analyses are that often structural relations such as class and the state have become so reified in social and mental worlds that they disappear. An ironic outcome indeed. Even when this structural context is considered, it is often examined in broad, oversimplified, and underspecified manners. This attention to social structure can be an important part of developing a critical theory of entrepreneurship, as we remember that the existing structural arrangements at any point are not inevitable, but can be subjected to criticism and change. In order to deal with these problems, we need to revive the concept of social structure. Thus we are arguing that 'there exist in the social world itself and not only within symbolic systems (language, myths, etc.) objective structures independent of the consciousness and will of agents, which are capable of guiding and constraining their practices or their representations' (Bourdieu, 1990: 122). Objective still means socially constructed, but social constructions that have become solidified as structures external to individual subjects. Examples of these structures may include basic 'organising principals' which are relatively stable and spatially and historically situated such as capitalism, kinship, patriarchy and the state. Some entrepreneurship researchers, particularly those drawing on sociology and political science, have shown the importance of social structure for understanding entrepreneurship (see for example Swedberg, 2000).

### FISCAL CLIFF

### No Pass

#### Election fears means no deal and capital not key

**Politico 10-23**

“2014 Looms for Fiscal Cliff Players,”

Forget the 2012 deadline. **Fiscal cliff politics is all about 2014.**¶ The very senators -- think Mitch **McConnell and** Max **Baucus -- who will be central to a sweeping** tax-and-spending **deal are the same ones who could face** the most **difficult reelection** bids of their careers, come 2014. **Primary threats** from the right **loom large over** Republican **senators as they negotiate tax rates**. Moderate Democrats also could be squeamish about tax hikes or cuts to Medicare. And **whatever t**ax and spending **deal emerges is certain to anger large voting blocs and inspire serious general election opposition**.¶ The longer Congress waits, the more intense the political pressure will become -- and the harder it will be to reach a major deficit-cutting deal.¶ Even though the votes haven't been counted for the 2012 election, senators who are both involved in fiscal cliff negotiations and up for election in 2014 are aware that the tough decisions they make now will linger into the next cycle.¶ "If there's a political price to be paid, if there's capital that needs to be expended in order to save the country, I and my colleagues, I believe are willing to do that," Sen. John Cornyn, the likely next No. 2 Senate Republican who faces reelection in 2014, told POLITICO.¶ How a deal looks obviously depends on whether Mitt Romney or Barack Obama wins -- and on the party leadership in control of the next Senate and House. If Obama wins, Republicans fear they'll be backed into a corner by an emboldened president to push through higher taxes on families earning more than $250,000. But if Romney wins, Congress will have to engineer a short-term agreement with Senate Democratic Leader Harry Reid and House Speaker John Boehner -- which is no small task in and of itself -- giving the new president time to develop a budget deal of his own.¶ But the winner of the race for the White House only has so much power -- especially over a divided Congress and a Senate that could be tied up by filibusters. That means there must be a bipartisan compromise, a prospect certain to force endangered senators to cast votes with electoral ramifications.¶ About a dozen senators who could be party to a deal -- either because of their leadership spots and committee positions or because they've inserted themselves into the horse-trading so far -- are up for reelection in 2014. Their to-do list is a minefield: expiring Bush tax cuts for all income groups; reversing $109 billion in sequester cuts to domestic and defense programs; reinstating jobless benefits; handling the expiring payroll tax cut; and fixing payment rates for physicians serving Medicare patients. And don't forget the national debt ceiling, which will need to be raised in the coming months.¶ Senior officials in both parties are pessimistic a sweeping deal can be reached by the end of the year. There are ongoing talks about temporarily delaying the fiscal cliff by approving a "down payment" with budget cuts coupled with a process that forces Congress to act by the middle of next year.¶ So no matter how it shakes out, members of both parties could be forced to cast a series of treacherous votes, much like the unpopular 2008 bank bailout or the 2011 Budget Control Act that paved the way to the sequester Congress is now trying to avoid.¶ McConnell, who will already be the Democrats' top target in 2014, needs to worry about alienating the right wing of his conference and the tea party in his home state on any deficit deal. Tennessee Sen. Lamar Alexander, who is up in 2014 and has been in discussions about a possible bipartisan plan with Sen. Michael Bennet (D-Colo.), has already said that whatever deal emerges will be unpopular back home.¶ Sen. Lindsey Graham (R-S.C.) has signaled a willingness to raise revenues in order to reverse the defense sequestration cuts set to take effect in the new year. If he does, he'll certainly face added scrutiny from the anti-tax Club for Growth, which has signaled it may get behind any GOP primary challenger who emerges against him. Sen. Saxby Chambliss (R-Ga.), who expects a primary challenge, has spent the better part of the past two years negotiating with a bipartisan group of senators who are weighing more tax revenues.¶ New taxes -- which Democrats are demanding as part of a deal -- will almost certainly spawn a civil war on the right, just as these members plan to campaign for reelection.¶ "We don't need to cut deals on that," South Carolina Sen. Jim DeMint, a tea party force in GOP primary politics, told POLITICO. "We need to reform the Tax Code and make it lower."¶ But it's not just the Republicans who face these internal pressures. If the GOP agrees to any revenue, it will come at a price -- namely, on cutting entitlements like Medicare, Medicaid and Social Security, which Democrats have vowed to protect throughout the 2012 campaign season. If Romney wins, some at-risk Democrats could be under enormous pressure to buck their party's leadership and join with the new president by extending the current tax rates, a decision certain to infuriate their base.¶ On the Democratic side, Baucus could face the toughest reelection bid of his career in the red state of Montana, where an October survey by the Democratic firm Public Policy Polling showed his approval rating at a meager 35 percent, with 54 percent disapproving of his performance. But Baucus -- chairman of the powerful Finance Committee that oversees taxes, entitlements, health care and trade -- is already paving the groundwork for a major deal on revising the Tax Code and cutting trillions from the budget, two efforts certain to spawn a major lobbying war in Washington.¶ **Midterms usually are not friendly to a president in his second term, so if Obama wins, he may find it difficult to win the backing of some red-state Democrats facing reelection, like** Arkansas Sen. Mark **Pryor**, Louisiana Sen. Mary **Landrieu**, Alaska Sen. Mark **Begich**, South Dakota Sen. Tim **Johnson and** North Carolina Sen. Kay **Hagan**.¶ Two Democrats in the so-called Gang of Eight budget negotiations -- Virginia Sen. Mark Warner and Senate Majority Whip Dick Durbin -- are also both up in 2014. And if Warner decides to make a bid at the Virginia governor's mansion next year, his efforts to run for the Democratic nomination could run up against his efforts to position himself as a bipartisan deal maker.¶ "You are going to have Democrats up in places like North Carolina, Arkansas, Louisiana, South Dakota, Alaska, these are somewhat more moderate-conservative places -- so hard votes for those folks will be a little more difficult," former Indiana Sen. Evan Bayh, a Democrat, said in an interview. "And a lot of the incumbent Republicans will be concerned about the possibility of a tea party challenge if they violate party orthodoxy. ... The sooner they can get it done, the less likely politics is going to intrude."

### Link

#### Bipart key to agenda

**Kondracke 10**

(Morton, Nieman Fellow at Harvard University and news analyst [http://www.cqpolitics.com/wmspage.cfm?docID=news-000003668289&cpage=1] Obama Needs to Talk to GOP Leaders—Soon/ May 21)

It’s understandable why President [Barack Obama](http://www.cqpolitics.com/wmspage.cfm?docID=profile-000000007612) wouldn’t want to play golf with Rush Limbaugh, but he needs to start talking to Republican leaders [Mitch McConnell](http://www.cqpolitics.com/wmspage.cfm?docID=profile-000000000202) and [John A. Boehner](http://www.cqpolitics.com/wmspage.cfm?docID=profile-000000000379) . Elected on a promise to end toxic partisanship, Obama has not had any one-on-one contact with Republican congressional leaders during his presidency and has failed to develop personal relationships with them. As Roll Call’s Emily Pierce reported earlier this month, “the last time Oba ma and McConnell spoke privately, one-on-one, was prior to Obama’s January 2009 inauguration.” Obama did call McConnell, the Senate minority leader, briefly to advise him he was nominating Solicitor General Elena Kagan for the Supreme Court — “something we already knew,” McConnell’s spokesman said. Boehner’s office confirmed that the House minority leader has had no contact with Obama, either, outside of group sessions such as White House leadership meetings. It’s not clear that personal contact would have resulted in any Republican support for his policies — there’s been precious little, of course — but it might have, assuming conversations led to compromise. Arguably, Obama hasn’t needed bipartisanship to get his programs through Congress. Democrats had a 70-seat margin in the House and, until recently, 60 votes in the Senate. But every indication is that Republicans will be stronger in the 112th Congress that takes office in January, so Obama will either be forced to deal with the GOP leadership if he wants to get anything done in the next two years, or be thwarted.

# Round 3 v Cal HS

## 1AC

### Plan

#### The United States Department of Defense should procure small modular reactors for the use of military bases in the United States.

### Grid

#### Grid disruptions are inevitable - only SMR’s can solve**Robitaille 12**

(George, Department of Army Civilian, United States Army War College, “Small Modular Reactors: The Army’s Secure Source of Energy?” 21-03-2012, Strategy Research Project)

In recent years, the U.S Department of Defense (DoD) has identified a security issue at our installations related to the dependence on the civilian electrical grid. 1 The DoD depends on a steady source of electricity at military facilities to perform the functions that secure our nation. The flow of electricity into military facilities is controlled by a public grid system that is susceptible to being compromised because of the age of the infrastructure, damage from natural disasters and the potential for cyber attacks. Although most major functions at military installations employ diesel powered generators as temporary backup, the public grid may not be available to provide electricity when it is needed the most. The United States electrical infrastructure system is prone to failures and susceptible to terrorist attacks. 2 It is critical that the source of electricity for our installations is reliable and secure. In order to ensure that our military facilities possess a secure source of electricity, either the public system of electric generation and distribution is upgraded to increase its reliability as well as reducing its susceptibility to cyber attack or another source of electricity should be pursued. Although significant investments are being made to upgrade the electric grid, the current investment levels are not keeping up with the aging system. Small modular reactors (SMRs) are nuclear reactors that are about an order of magnitude smaller than traditional commercial reactor used in the United States. SMRs are capable of generating electricity and at the same time, they are not a significant contributor to global warming because of green house gas emissions. The DoD needs to look at small modular nuclear reactors (SMRs) to determine if they can provide a safe and secure source of electricity. Electrical Grid Susceptibility to Disruptions According to a recent report by the Defense Science Board, the DoD gets ninety nine percent of their electrical requirements from the civilian electric grid. 3 The electric grid, as it is currently configured and envisioned to operate for the foreseeable future, may not be reliable enough to ensure an uninterrupted flow of electricity for our critical military facilities given the influences of the aging infrastructure, its susceptibility to severe weather events, and the potential for cyber attacks. The DoD dependency on the grid is reflected in the $4.01 Billion spent on facilities energy in fiscal year 2010, the latest year which data was available. 4 The electricity used by military installations amounts to $3.76 billion. 5 As stated earlier, the DoD relies on the commercial grid to provide a secure source of energy to support the operations that ensure the security of our nation and it may not be available when we need it. The system could be taken down for extended periods of time by failure of aging components, acts of nature, or intentionally by cyber attacks. Aging Infrastructure. The U.S electric power grid is made up of independently owned power plants and transmission lines. The political and environmental resistance to building new electric generating power plants combined with the rise in consumption and aging infrastructure increases the potential for grid failure in the future. There are components in the U.S. electric grid that are over one hundred years old and some of the recent outages such as the 2006 New York blackout can be directly attributed to this out of date, aging infrastructure. 6 Many of the components of this system are at or exceeding their operational life and the general trend of the utility companies is to not replace power lines and other equipment until they fail. 7 The government led deregulation of the electric utility industry that started in the mid 1970s has contributed to a three decade long deterioration of the electric grid and an increased state of instability. Although significant investments are being made to upgrade the electric grid, the many years of prior neglect will require a considerable amount of time and funding to bring the aging infrastructure up to date. Furthermore, the current investment levels to upgrade the grid are not keeping up with the aging system. 8 In addition, upgrades to the digital infrastructure which were done to increase the systems efficiency and reliability, have actually made the system more susceptible to cyber attacks. 9 Because of the aging infrastructure and the impacts related to weather, the extent, as well as frequency of failures is expected to increase in the future. Adverse Weather. According to a 2008 grid reliability report by the Edison Electric Institute, sixty seven per cent of all power outages are related to weather. Specifically, lightning contributed six percent, while adverse weather provided thirty one percent and vegetation thirty percent (which was predominantly attributed to wind blowing vegetation into contact with utility lines) of the power outages. 10 In 1998 a falling tree limb damaged a transformer near the Bonneville Dam in Oregon, causing a cascade of related black-outs across eight western states. 11 In August of 2003 the lights went out in the biggest blackout in North America, plunging over fifty million people into darkness over eight states and two Canadian provinces. Most areas did not have power restored four or five days. In addition, drinking water had to be distributed by the National Guard when water pumping stations and/or purification processes failed. The estimated economic losses associated with this incident were about five billion dollars. Furthermore, this incident also affected the operations of twenty two nuclear plants in the United States and Canada. 12 In 2008, Hurricane Ike caused approximately seven and a half million customers to lose power in the United States from Texas to New York. 13 The electric grid suffered numerous power outages every year throughout the United States and the number of outages is expected to increase as the infrastructure ages without sufficient upgrades and weather-related impacts continue to become more frequent. Cyber Attacks. The civilian grid is made up of three unique electric networks which cover the East, West and Texas with approximately one hundred eighty seven thousand miles of power lines. There are several weaknesses in the electrical distribution infrastructure system that could compromise the flow of electricity to military facilities. The flow of energy in the network lines as well as the main distribution hubs has become totally dependent on computers and internet-based communications. Although the digital infrastructure makes the grid more efficient, it also makes it more susceptible to cyber attacks. Admiral Mr. Dennis C. Blair (ret.), the former Director of National Intelligence, testified before Congress that “the growing connectivity between information systems, the Internet, and other infrastructures creates opportunities for attackers to disrupt telecommunications, electrical power, energy pipelines, refineries, financial networks, and other critical infrastructures. 14 ” The Intelligence Community assesses that a number of nations already have the technical capability to conduct such attacks. 15 In the 2009 report, Annual Threat Assessment of the Intelligence Community for the Senate Armed Services Committee, Adm. Blair stated that “Threats to cyberspace pose one of the most serious economic and national security challenges of the 21st Century for the United States and our allies.”16 In addition, the report highlights a growing array of state and non-state actors that are targeting the U.S. critical infrastructure for the purpose of creating chaos that will subsequently produce detrimental effects on citizens, commerce, and government operations. These actors have the ability to compromise, steal, change, or completely destroy information through their detrimental activities on the internet. 17 In January 2008, US Central Intelligence Agency senior analyst Tom Donahue told a gathering of three hundred international security managers from electric, water, oil & gas, and other critical industry, that data was available from multiple regions outside the United States, which documents cyber intrusions into utilities. In at least one case (outside the U.S.), the disruption caused a power outage affecting multiple cities. Mr. Donahue did not specify who executed these attacks or why, but did state that all the intrusions were conducted via the Internet. 18 During the past twenty years, advances in computer technologies have permeated and advanced all aspects of our lives. Although the digital infrastructure is being increasingly merged with the power grid to make it more efficient and reliable, it also makes it more vulnerable to cyber attack. In October 2006, a foreign hacker invaded the Harrisburg, PA., water filtration system and planted malware. 19 In June 2008, the Hatch nuclear power plant in Georgia shut down for two days after an engineer loaded a software update for a business network that also rebooted the plant's power control system. In April 2009, The Wall Street Journal reported that cyber spies had infiltrated the U.S. electric grid and left behind software that could be used to disrupt the system. The hackers came from China, Russia and other nations and were on a “fishing expedition” to map out the system. 20 According to the secretary of Homeland Security, Janet Napolitano at an event on 28 October 2011, cyber–attacks have come close to compromising the country’s critical infrastructure on multiple occasions. 21 Furthermore, during FY11, the United States Computer Emergency Readiness Team took action on more than one hundred thousand incident reports by releasing more than five thousand actionable cyber security alerts and information products. 22 The interdependence of modern infrastructures and digital based systems makes any cyber attacks on the U.S. electric grid potentially significant. The December 2008 report by the Commission on Cyber Security for the forty fourth Presidency states the challenge plainly: “America’s failure to protect cyberspace is one of the most urgent national security problems facing the new administration”. 23 The susceptibility of the grid to being compromised has resulted in a significant amount of resources being allocated to ensuring the systems security. Although a substantial amount of resources are dedicated to protecting the nation’s infrastructure, it may not be enough to ensure the continuous flow of electricity to our critical military facilities. SMRs as they are currently envisioned may be able to provide a secure and independent alternative source of electricity in the event that the public grid is compromised. SMRs may also provide additional DoD benefit by supporting the recent government initiatives related to energy consumption and by circumventing the adverse ramifications associated with building coal or natural gas fired power plants on the environment.\

#### Cyber-attack’s coming --- actors are probing US grid weaknesses

Reed 10/11

John, Reports on the frontiers of cyber war and the latest in military technology for Killer Apps at Foreign Policy, "U.S. energy companies victims of potentially destructive cyber intrusions", 2012, killerapps.foreignpolicy.com/posts/2012/10/11/us\_energy\_companies\_victims\_of\_potentially\_destructive\_cyber\_attacks

Foreign actors are probing the networks of key American companies in an attempt to gain control of industrial facilities and transportation systems, Defense Secretary Leon Panetta revealed tonight.¶ "We know that foreign **cyber actors are probing America's critical infrastructure networks**," said Panetta, disclosing previously classified information during a speech in New York laying out the Pentagon's role in protecting the U.S. from cyber attacks. "They are targeting the computer control systems that operate chemical, **electricity** and water plants, and those that guide transportation thorough the country."¶ He went on to say that the U.S. government knows of "specific instances where intruders have gained access" to these systems -- frequently known as Supervisory Control and Data Acquisition (or SCADA) systems -- and that "they are seeking to create advanced tools to attack these systems and cause panic, destruction and even the loss of life," according to an advance copy of his prepared remarks.¶ The secretary said that **a coordinated attack on enough critical infrastructure could be a "cyber Pearl Harbor" that would "cause physical destruction and loss of life, paralyze and shock the nation, and create a profound new sense of vulnerability.**"¶ While there have been reports of criminals using 'spear phishing' email attacks aimed at stealing information about American utilties, Panetta's remarks seemed to suggest more sophisticated, nation-state backed attempts to actually gain control of and damage power-generating equipment. ¶ Panetta's comments regarding the penetration of American utilities echo those of a private sector cyber security expert Killer Apps spoke with last week **who said that the networks of American electric companies were penetrated, perhaps in preparation for a Stuxnet-style attack**.¶ Stuxnet is the famous cyber weapon that infected Iran's uranium-enrichment centrifuges in 2009 and 2010. Stuxnet is believed to have caused some of the machines to spin erratically, thereby destroying them.¶ "**There is hard evidence** that there has been penetration of our power companies, and given Stuxnet, that is a staging step before destruction" of electricity-generating equipment, the expert told Killer Apps. Because uranium centrifuges and power turbines are both spinning machines, "**the attack is identical -- the one to take out the centrifuges and the one to take out our power systems is the same attack**."¶ "If a centrifuge running at the wrong speed can blow apart" so can a power generator, said the expert. "If you do, in fact, spin them at the wrong speeds, you can blow up any rotating device."¶ Cyber security expert Eugene Kaspersky said two weeks ago that one of his greatest fears is someone reverse-engineering a sophisticated cyber weapon like Stuxnet **-- a relatively easy task** -- and he noted that Stuxnet itself passed through power plants on its way to Iran. "Stuxnet infected thousands of computer systems all around the globe, I know there were power plants infected by Stuxnet very far away from Iran," Kaspersky said.

#### Disruptions cause nuclear lashout – SMRs solve but renewables fail

Andres and Breetz 11

(Richard B. Andres is Professor of ¶ national Security Strategy at the ¶ national War College and a Senior fellow and energy and environmental ¶ Security and Policy Chair in the Center ¶ for Strategic research, institute for national Strategic Studies, at the national Defense University. Hanna L. Breetz is a doctoral candidate in the Department of Political Science at the Massachusetts institute of technology, “Small Nuclear Reactors ¶ for Military Installations:¶ Capabilities, Costs, and ¶ Technological Implications” Institute for National Strategic Studies, <http://www.ndu.edu/press/lib/pdf/strforum/sf-262.pdf>, SEH)

Grid Vulnerability**. DOD is unable to provide its ¶ bases with electricity when the civilian electrical grid is ¶ offline for an extended period of time**. Currently, domestic military installations receive 99 percent of their ¶ electricity from the civilian power grid. As explained in a ¶ recent study from the Defense Science Board:¶ DOD’s key problem with electricity is **that** critical ¶ missions, such as national strategic awareness and ¶ national command authorities, are **almost entirely ¶** dependent on the **national transmission** grid. . . ¶ **[which] is fragile, vulnerable, near its capacity ¶ limit, and outside of DOD control**. In most cases, ¶ **neither the grid nor on-base backup power provides¶ sufficient reliability to ensure continuity of critical ¶ national priority functions and oversight of ¶ strategic missions in the face of** a long term (several ¶ months) **outage**.¶ 7¶ The grid’s fragility was demonstrated during the 2003 ¶ Northeast blackout in which 50 million people in the ¶ United States and Canada lost power, some for up to a ¶ week, when one Ohio utility failed to properly trim trees. ¶ The blackout created cascading disruptions in sewage ¶ systems, gas station pumping, cellular communications, ¶ border check systems, and so forth, and demonstrated the ¶ interdependence of modern infrastructural systems.¶ 8¶ More recently, awareness has been growing that ¶ **the grid is also vulnerable to purposive attacks**. A report sponsored by the Department of Homeland Security suggests **that a coordinated cyberattack on the grid ¶ could result in a third of the country losing power for ¶ a period of weeks or months**.¶ 9¶ Cyberattacks on critical ¶ infrastructure are not well understood. It is not clear, for ¶ instance, whether existing terrorist groups might be able ¶ to develop the capability to conduct this type of attack. **It ¶ is likely, however, that some nation-states either have or ¶ are working on developing the ability to take down the ¶ U.S. grid**. **In the event of a war** with one of these states, ¶ it is possible, if not likely, that **parts of the civilian grid ¶ would cease to function, taking with them military bases ¶ located in affected regions.**¶ Government and private organizations are currently ¶ working to secure the grid against attacks; however, it is ¶ not clear that they will be successful. Most military bases ¶ currently have backup power that allows them to function for a period of hours or, at most, a few days on their ¶ own. If power were not restored after this amount of time, ¶ the results could be disastrous. First, military assets taken ¶ offline by the crisis would not be available to help with disaster relief. Second, **during an extended blackout, global ¶ military operations could be seriously compromised; this ¶ disruption would be particularly serious if the blackout ¶ was induced during major combat operations.** During the ¶ Cold War, this type of event was far less likely because the United States and Soviet Union shared the common understanding that blinding an opponent with a grid blackout could escalate to nuclear war. America’s current opponents, however, may not share this fear or be deterred ¶ by this possibility.¶ In 2008, the Defense Science Board stressed that ¶ DOD should mitigate the electrical grid’s vulnerabilities by turning military installations into “islands” of ¶ energy self-sufficiency.¶ 10¶ **The department has made efforts to do so by promoting efficiency programs** that ¶ lower power consumption on bases and by constructing ¶ renewable power generation facilities on selected bases. ¶ Unfortunately, these programs **will not come close to ¶** reaching the goal of **islanding** thevast majority of bases**. ¶ Even with** massive investment in efficiency and **renewables,** most **bases would not** be able to **function for more ¶ than a few days after the** civilian **grid went offline**. **Unlike other alternative sources of energy, small reactors have the potential to solve DOD’s vulnerability to ¶ grid outages.** **Most bases have relatively light power demands when compared to civilian towns or cities. Small ¶ reactors could easily support bases’ power demands separate from the civilian grid during crises**. In some cases, ¶ the reactors could be designed to produce enough power ¶ not only to supply the base, but also to provide critical ¶ services in surrounding towns during long-term outages.¶ Strategically, islanding bases with small reactors ¶ has another benefit. **One of the main reasons an enemy ¶ might be willing to risk reprisals by taking down the ¶ U.S. grid during a period of military hostilities would ¶ be to affect ongoing military operations. Without the ¶ lifeline of intelligence, communication, and logistics ¶ provided by U.S. domestic bases, American military operations would be compromised in almost any conceivable contingency. Making bases more resilient to ¶ civilian power outages would reduce the incentive for ¶ an opponent to attack the grid.** An opponent might ¶ still attempt to take down the grid for the sake of disrupting civilian systems, but **the powerful incentive to ¶ do so in order to win an ongoing battle or war would ¶ be greatly reduced.**

### China

#### Global SMR development’s inevitable – only a question of whether the US leads

Hiruo 10
(Elaine, Managing Editor of Platts, "SMR technology gives US chance at market leadership, vendors say," 9-2-10, Lexis)

**The US nuclear industry lost its leadership** position **in the global market for large reactors and now has the opportunity to secure that role for s**mall **m**odular **r**eactor**s,** some SMR vendors told a subcommittee of the Blue Ribbon Commission on America's Nuclear Future August 30.¶ But they stressed their **companies will need the federal government's help to beat foreign competitors to the market.**¶ **"We're at a unique crossroads right now**," Christofer Mowry, president of Babcock and Wilcox Nuclear Energy, told the reactor and fuel cycle technology subcommittee during its two-day meeting in Washington. B&W is one of several US companies — including Hyperion Power Generation, NuScale and Westinghouse — developing an SMR design.¶ "Other countries want a technology that has been built in the host country first," Paul Lorenzini, CEO of NuScale, told the panel. "**There are lots of** small reactor **designs out there,**" he said. Both the Koreans and Japanese have SMR programs, according to industry executives on the speakers panel. **The question is**, Mowry said, **who enters the** global **market first with a reactor already operating on its home turf.**

#### SMR key to nuclear leadership - recovers leadership lost to China

Rosner and Goldberg 11

(Robert Rosner, astrophysicist and founding director of the Energy Policy Institute at Chicago. He was the director of Argonne National Laboratory from 2005 to 2009, Stephen Goldberg, Special Assistant to the Director, Argonne National Laboratory ¶ Senior Fellow, Energy Policy Institute at Chicago¶ Research Coordinator, Global Nuclear Future Initiative ¶ American Academy of Arts and Sciences, “Small Modular Reactors – Key to Future Nuclear Power ¶ Generation in the U.S.” Energy Policy Institute at Chicago, <http://csis.org/files/attachments/111129_SMR_White_Paper.pdf>, SEH)

As stated earlier, SMRs have the potential to achieve significant greenhouse gas emission¶ reductions. They could provide alternative baseload power generation to facilitate the retirement¶ of older, smaller, and less efficient coal generation plants that would, otherwise, not be good¶ candidates for retrofitting carbon capture and storage technology. They could be deployed in¶ regions of the U.S. and the world that have less potential for other forms of carbon-free¶ electricity, such as solar or wind energy. There may be technical or market constraints, such as¶ projected electricity demand growth and transmission capacity, which would support SMR¶ deployment but not GW-scale LWRs. From the on-shore manufacturing perspective, a key point¶ is that the manufacturing base needed for SMRs can be developed domestically. Thus, while the¶ large commercial LWR industry is seeking to transplant portions of its supply chain from current¶ foreign sources to the U.S., **the SMR industry offers the potential to establish a large domestic¶ manufacturing base building upon already existing U.S. manufacturing infrastructure and¶ capability,** **including the Naval shipbuilding and underutilized domestic nuclear component and¶ equipment plants**. The study team learned that a number of sustainable domestic jobs could be¶ created – that is, the full panoply of design, manufacturing, supplier, and construction activities –¶ if the U.S. can establish itself as a credible and substantial designer and manufacturer of SMRs.¶ While many SMR technologies are being studied around the world, a **strong U.S.¶ commercialization** program **can enable U.S. industry to be first to market SMRs,** thereby **serving¶ as a fulcrum for** export growth as well as a lever in **influencing international decisions on¶ deploying both** nuclear **reactor and** nuclear **fuel cycle tech**nology. **A** viable **U.S.-centric SMR¶ industry would** enablethe U.S. to **recapture** technological **leadership in** commercial **nuclear¶ tech**nology, **which has been lost to** suppliers in France, Japan, Korea, Russia, and, now rapidly¶ emerging, **China**.

#### Action now is key – any delay allows China to get ahead

Wheeler 12
(Brian, editor of Power Engineering magazine, "Developing Small Modular Reactor Designs in the U.S," 4-1-12, [http://www.power-eng.com/articles/npi/print/volume-5/issue-2/nucleus/developing-small-modular-reactor-designs-in-the-us.html-http://www.power-eng.com/articles/npi/print/volume-5/issue-2/nucleus/developing-small-modular-reactor-designs-in-the-us.html](http://www.power-eng.com/articles/npi/print/volume-5/issue-2/nucleus/developing-small-modular-reactor-designs-in-the-us.html-http%3A/www.power-eng.com/articles/npi/print/volume-5/issue-2/nucleus/developing-small-modular-reactor-designs-in-the-us.html))

The development of small modular reactors in the U.S. continues to gain support as the country searches for clean energy options. Although concepts are still being designed, **the U.S. D**epartment **o**f **E**nergy **gave the sector a boost** in March **when it released** **a** Funding Opportunity Announcement to establish **cost-shared agreements** **to support the design and licensing of SMRs.** A total of $450 million will be made available to support two SMRs over five years.¶ "America's choice is clear," said Energy Secretary Steven Chu. "We can either develop the next generation of clean energy technologies, which will help create thousands of jobs and export opportunities here in America, or we can wait for other countries to take the lead."¶ The Energy Department said SMRs are about one-third the size of current nuclear power plants and are designed to offer a host of safety, siting, construction and economic benefits. The size, according to DOE, makes SMRs ideal for small electric grids and locations that cannot support large reactors. Also, the reduced cost due to factory production may make the SMR more attractive to utilities seeking to add a smaller amount of power.¶ "We really see a market right now that includes utilities that don't have a large financial base and that are interested in clean, sustainable power. They are looking at the SMR as an investment of a billion dollars versus several billion dollars for large nuclear," said John Goossen, vice president of Innovation and SMR Development at Westinghouse. "These utilities, in most cases, do not need large chunks of power and are looking to add power incrementally as part of their plans for growth." In February, the Electric Power Research Institute and the Oak Ridge National Laboratory released a study that stated the U.S. has the potential to generate 201 GW from SMRs. For their study, a small modular reactor was labeled as 350 MWe or less. The DOE defines an SMR as 300 MWe or less. The study stated that "350 MWe was considered a reasonable bounding estimate of an initial SMR installation."¶ **The U.S. is leading the world in the amount of SMR designs, but China could be the first country to have a SMR design operational.** Launched in 2011, **a** 200 MWe HTR-PM **reactor is under construction with the support of China Huaneng Group, China Nuclear Engineering and Construction, and Tsinghua University's INET,** according to the World Nuclear Association.¶ "**The U.S. needs to move faster if we are going to compete with the** South Koreans, the **Chinese** and the Russians," said Bob Prince, vice chairman and CEO, Gen4 Energy.

**Ceding nuclear leadership to China leads to unchecked Chinese hege in Asia - kill US regional leadership**

**Cullinane ‘11**

[Scott Cullinane is a graduate student at the Institute of World Politics in Washington, D.C <http://www.ensec.org/index.php?option=com_content&view=article&id=319:america-falling-behind-the-strategic-dimensions-of-chinese-commercial-nuclear-energy&catid=118:content&Itemid=376> ETB]

Due to a confluence of events the United States has recently focused more attention on nuclear weapons policy than it has in previous years; however, the proliferation of commercial nuclear technology and its implications for America’s strategic position have been largely ignored. While the Unites States is currently a participant in the international commercial nuclear energy trade, **America’s** own **domestic construction of nuclear power plants has atrophied severely and the US risks losing its competitive edge in** the **nuclear energy** arena.¶ Simultaneously, the People’s Republic of **China** (PRC) **has made great strides in closing the nuclear** energy **development gap with America**. **Through a combination of importing technology, research from within China itself, and a disciplined policy approach the PRC is increasingly able to leverage the export of commercial nuclear power as part of its national strategy**. **Disturbingly, China does not share America’s commitment to stability, transparency, and responsibility when exporting nuclear technology**. This is a growing strategic weakness and risk for the United States**. To remain competitive and to be in a position to offset the PRC when required the American government should encourage** the **domestic** use of **nuclear power and spur** the forces of **tech**nological **innovation**.¶ History has recorded well American wartime nuclear developments which culminated in the July 1945 Trinity Test, but what happened near Arco, Idaho six years later has been overlooked. In 1951, scientists for the first time produced usable electricity from an experimental nuclear reactor. Once this barrier was conquered the atom was harnessed to generate electricity and permitted America to move into the field of commercial nuclear power. In the next five years alone the United States signed over 20 nuclear cooperation agreements with various countries. Not only did the US build dozens of power plants domestically during the 1960s and 1970s, the US Export-Import Bank also distributed $7.1 billion dollars in loans and guarantees for the international sale of 49 reactors. American built and designed reactors were exported around the world during those years. Even today, more than 60% of the world’s 440 operating reactors are based on technology developed in the United States. The growth of the US civilian nuclear power sector stagnated after the Three Mile Island incident in 1979 – the most serious accident in American civilian nuclear power history. Three Mile Island shook America’s confidence in nuclear power and provided the anti-nuclear lobby ample fuel to oppose the further construction of any nuclear power plants. In the following decade, 42 planned domestic nuclear power plants were cancelled, and in the 30 years since the Three Mile Island incident the American nuclear power industry has survived only through foreign sales and merging operations with companies in Asia and Europe. Westinghouse sold its nuclear division to Toshiba and General Electric joined with Hitachi. Even the highest levels of the American government came to cast nuclear power aside. President Bill Clinton bragged in his 1993 State of the Union Address that “we are eliminating programs that are no longer needed, such as nuclear power research and development.” ¶ **America’s slow pace of reactor construction over the past three decades has stymied innovation and caused the nuclear sector and its industrial base to shrivel**. While some aspects of America’s nuclear infrastructure still operate effectively, **many critical areas have atrophied.** For example, one capability that America has entirely lost is the means to cast ultra heavy forgings in the range of 350,000 – 600,000 pounds, which impacts the construction of containment vessels, turbine rotors, and steam generators. In contrast, Japan, China, and Russia all possess an ultra heavy forging capacity and South Korea and India plan to build forges in this range. Likewise, the dominance America enjoyed in uranium enrichment until the 1970s is gone. The current standard centrifuge method for uranium enrichment was not invented in America and today 40% of the enriched uranium US power plants use is processed overseas and imported. Another measure of how much the US nuclear industry has shrunk is evident in the number of companies certified to handle nuclear material. In the 1980s the United States had 400 nuclear suppliers and 900 holders of N-stamp certificates (N-stamps are the international nuclear rating certificates issued by the American Society of Mechanical Engineers). By 2008 that number had reduced itself to 80 suppliers and 200 N-stamp holders. A recent Government Accountability Office report, which examined data from between 1994 and 2009, found the US to have a declining share of the global commercial nuclear trade. However, during that same period over 60 reactors were built worldwide. Nuclear power plants are being built in the world increasingly by non-American companies.¶ The American nuclear industry entered the 1960s in a strong position, yet over the past 30 years other countries have closed the development gap with America. **The implications of this change go beyond economics or prestige to include national security. These changes would be less threatening if friendly allies were the ones moving forward with developing a nuclear export industry; however, the quick advancement of the PRC in nuclear energy changes the strategic calculus for America.**¶ The shifting strategic landscape¶ **While America’s nuclear industry has languished, current changes in the world’s strategic layout no longer allow America the option of maintaining the status quo without being surpassed.** The drive for research, development, and scientific progress that grew out of the Cold War propelled America forward, but those priorities have long since been downgraded by the US government. **The economic development of formerly impoverished countries means that the US cannot assume continued dominance by default**. **The rapidly industrializing PRC is seeking its own place among the major powers of the world and is vying for hegemony in Asia; nuclear power is an example of their larger efforts to marshal their scientific and economic forces as instruments of national power.**¶ The rise of China is a phrase that connotes images of a backwards country getting rich off of exporting cheap goods at great social and environmental costs. Yet, this understanding of the PRC has lead many in the United States to underestimate China’s capabilities. The Communist Party of China (**CPC) has undertaken a comprehensive long-term strategy to transition from a weak state that lags behind the West to a country that is a peer-competitor to the United States. Nuclear technology provides a clear example of this.** ¶ In 1978, General Secretary Deng Xiaoping began to move China out of the destructive Mao era with his policies of 'reform and opening.' As part of these changes during the 1980s, the CPC began a concerted and ongoing effort to modernize the PRC and acquire advanced technology including nuclear technology from abroad. This effort was named Program 863 and included both legal methods and espionage. By doing this, the PRC has managed to rapidly catch up to the West on some fronts. In order to eventually surpass the West in scientific development the PRC launched the follow-on Program 973 to build the foundations of basic scientific research within China to meet the nation’s major strategic needs. These steps have brought China to the cusp of the next stage of technological development, a stage known as “indigenous innovation.”¶ ¶ In 2006 the PRC published their science and technology plan out to 2020 and defined indigenous innovation as enhancing original innovation, integrated innovation, and re-innovation based on assimilation and absorption of imported technology in order improve national innovation capability. The Chinese seek to internalize and understand technological developments from around the world so that they can copy the equipment and use it as a point to build off in their own research. This is a step beyond merely copying and reverse engineering a piece of technology. The PRC sees this process of absorbing foreign technology coupled with indigenous innovation as a way of leapfrogging forward in development to gain the upper hand over the West. **The PRC’s official statement on energy policy lists nuclear power as one of their target fields. When viewed within this context, the full range of implications from China’s development of nuclear technology becomes evident**. **The PRC is** now **competing with the U**nited **St**ates **in the areas of innovation and high-technology, two fields that have driven American power since World War Two**. **China’s economic appeal** is no longer merely the fact that it has cheap labor, but **is expanding its economic power in a purposeful way that directly challenges America’s position in the world**.¶ ¶ **The CPC uses the market to their advantage to attract nuclear technology and intellectual capital to China**. The PRC has incentivized the process and encouraged new domestic nuclear power plant construction with the goal of having 20 nuclear power plants operational by 2020. The Chinese Ministry of Electrical Power has described PRC policy to reach this goal as encouraging joint investment between State Owned Corporations and foreign companies. 13 reactors are already operating in China, 25 more are under construction and even more reactors are in the planning stages. ¶ In line with this economic policy, China has bought nuclear reactors from Westinghouse and Areva and is cooperating with a Russian company to build nuclear power plants in Taiwan. By stipulating that Chinese companies and personnel be involved in the construction process, China is building up its own domestic capabilities and expects to become self-sufficient. **China’s** State Nuclear Power Technology Corporation has **partnered with Westinghouse to build a new and larger reactor** based on the existing Westinghouse AP 1000 reactor. **This will give the PRC a reactor design of its own to then export**. **If the CPC is able to combine their control over raw materials, growing technical know-how, and manufacturing base, China will not only be a powerful economy, but be able to leverage this power to service its foreign policy goals as well.**¶ Even though the PRC is still working to master third generation technology, their scientists are already working on what they think will be the nuclear reactor of the future. China is developing Fourth Generation Fast Neutron Reactors and wants to have one operational by 2030. Additionally, a Chinese nuclear development company has announced its intentions to build the “world’s first high-temperature, gas-cooled reactor” in Shandong province which offers to possibility of a reactor that is nearly meltdown proof. A design, which if proved successful, could potentially redefine the commercial nuclear energy trade.¶ The risk to America¶ **The international trade of nuclear material is hazardous in that every sale and transfer increases the chances for an accident or for willful misuse of the material. Nuclear commerce must be kept safe in order for the benefits of nuclear power generation to be realized. Yet, China has a record of sharing dangerous weapons and nuclear material with unfit countries**. **It is a risk for America to allow China to become a nuclear exporting country with a competitive technical and scientific edge. In order to limit Chinese influence and the relative attractiveness of what they can offer, America must ensure its continuing and substantive lead in reactor technology.**¶ ¶ The PRC’s record of exporting risky items is well documented. It is known that during the 1980s **the Chinese shared nuclear weapon designs with Pakistan and continues to proliferate WMD-related material.** According to the Office of the Director of National Intelligence to Congress, **China sells technologies and components in the Middle East and South Asia that are dual use and could support WMD and missile programs.** Jane’s Intelligence Review reported in 2006 that China,¶ Despite a 1997 promise to Washington to halt its nuclear technology sales to Iran, such assistance is likely to continue. In 2005, Iranian resistance groups accused China of selling Iran beryllium, which is useful for making nuclear triggers and maraging steel (twice as hard as stainless steel), which is critical for fabricating centrifuges needed to reprocess uranium into bomb-grade material. ¶ **China sells dangerous materials in order to secure its geopolitical objectives, regardless if those actions harm world stability. There is little reason to believe China will treat the sale of nuclear reactors any differently. Even if the PRC provides public assurances that it will behave differently in the future, the CPC has not been truthful for decades about its nuclear material and weapons sales and hence lacks credibility**. For example, in 1983 Chinese Vice Premier Li Peng said that China does not encourage or support nuclear proliferation. In fact, it was that same year that China contracted with Algeria, then a non-NPT [Non-Proliferation Treaty] state, to construct a large, unsafeguarded plutonium production reactor. In 1991 a Chinese Embassy official wrote in a letter to the The Washington Post that 'China has struck no nuclear deal with Iran.' In reality, China had provided Iran with a research reactor capable of producing plutonium and a calutron, a technology that can be used to enrich uranium to weapons-grade. It has been reported that even after United Nation sanctions were put on Iran, Chinese companies were discovered selling “high-quality carbon fiber” and “pressure gauges” to Iran for use in improving their centrifuges.¶ In 2004 the PRC joined the Nuclear Suppliers Groups (NSG), gaining international recognition of their growing power in the nuclear field. In spite of this opportunity for China to demonstrate its responsibility with nuclear energy, it has not fulfilled it NSG obligations. The PRC has kept the terms of its nuclear reactor sale to Pakistan secret and used a questionable legal technicality to justify forgoing obtaining a NSG waiver for the deal. Additionally, China chose to forgo incorporating new safety measures into the reactors in order to avoid possible complications.¶ A further consequence of China exporting reactors is that these countries may wish to control the fuel cycle which provides the uranium to power their new reactors. The spread of fuel cycle technology comes with two risks: enrichment and reprocessing. Uranium can be enriched to between 3% and 5% for reactor use, but the process can be modified to produce 90% enriched uranium which is weapons-grade. Even if a country only produces low enriched uranium they could easily begin enriching at a higher level if they so choose**. Every new country that nuclear technology or information is spread to exponentially increases the risk of material being stolen, given to a third party or being used as the launching point for a weapons program**. **China’s history of proliferation and willingness to engage economically with very unsavory governments seems likely to increase the risks involving nuclear material.**

#### U.S. leadership in Asia solves multiple scenarios for war

Goh 8

(Evelyn, Lecturer in International Relations in the Department of Politics and International Relations at the Univ of Oxford, International Relations of the Asia-Pacific, “Hierarchy and the role of the United States in the East Asian security order,” 2008 8(3):353-377, Oxford Journals Database)

This is the main structural dilemma: **as long as the U**nited **S**tates **does not give up its primary position in the Asian regional hierarchy**, China is very unlikely to act in a way that will provide comforting answers to the two questions. Yet**, the East Asian regional order has been and still is constituted by US hegemony**, and **to change that could be extremely disruptive and may lead to regional actors acting in highly destabilizing ways**. **Rapid Japanese remilitarization, armed conflict across the Taiwan Straits, Indian nuclear brinksmanship directed toward Pakistan, or a highly destabilized Korean peninsula are all illustrative of potential regional disruptions**. 5 Conclusion To construct a coherent account of East Asia’s evolving security order, I have suggested that the United States is the central force in constituting regional stability and order. **The major patterns of equilibrium and turbulence in the region since 1945 can be explained by the relative stability of the US position at the top of the regional hierarchy**, **with periods of greatest insecurity being correlated with greatest uncertainty over the American commitment to managing regional order**. Furthermore, relationships of hierarchical assurance and hierarchical deference explain the unusual character of regional order in the post-Cold War era. However, **the greatest contemporary challenge to East Asian order is the potential conflict between China and the United States over rank ordering in the regional hierarchy**, a contest made more potent because of the intertwining of regional and global security concerns. Ultimately, though, investigating such questions of positionality requires conceptual lenses that go beyond basic material factors because it entails social and normative questions. How can China be brought more into a leadership position, while being persuaded to buy into shared strategic interests and constrain its own in ways that its vision of regional and global security may eventually be reconciled with that of the United States and other regional players? How can Washington be persuaded that its central position in the hierarchy must be ultimately shared in ways yet to be determined? The future of the East Asian security order is tightly bound up with the durability of the United States’ global leadership and regional domination. **At the regional level, the main scenarios of disruption are an outright Chinese challenge to US leadership, or the defection of key US allies, particularly Japan**. Recent history suggests, and the preceding analysis has shown, that challenges to or defections from **US leadership will come at junctures where it appears that the US commitment to the region is in doubt**, which in turn destabilizes the hierarchical order. At the global level, American geopolitical over-extension will be the key cause of change. This is the one factor that Hierarchy and the role of the United States in the East Asian security order 373lead to both greater regional and global turbulence, if only by the attendant strategic uncertainly triggering off regional challenges or defections. However, it is notoriously difficult to gauge thresholds of over-extension. More positively, East Asia is a region that has adjusted to previous periods of uncertainty about US primacy. Arguably, the regional consensus over the United States as primary state in a system of benign hierarchy could accommodate a shifting of the strategic burden to US allies like Japan and Australia as a means of systemic preservation. **The alternatives that could surface as a result of not doing so would appear to be much worse.**

#### Asian wars go nuclear

Landy 2k

 National Security Expert @ Knight Ridder, 3/10 ¶ (Jonathan, Knight Ridder, lexis)

Few if any experts think China and Taiwan, North Korea and South Korea, or India and Pakistan are spoiling to fight. But **even a minor miscalculation** by any of them **could destabilize Asia,** jolt the global economy **and** even **start** a **nuclear war. India, Pakistan and** **China all have nuclear weapons, and North Korea** may have a few, **too. Asia lacks the** kinds of organizations, negotiations and diplomatic **relationships that helped keep** an uneasy **peace** for five decades **in Cold War Europe. “Nowhere else** on Earth **are the stakes as high and relationships so fragile,”** said Bates Gill, director of northeast Asian policy studies at the Brookings Institution, a Washington think tank. “We see the convergence of great power interest overlaid with lingering confrontations with no institutionalized security mechanism in place. There are elements for potential disaster.” In an effort to cool the region’s tempers, President Clinton, Defense Secretary William S. Cohen and National Security Adviser Samuel R. Berger all will hopscotch Asia’s capitals this month. For America, the stakes could hardly be higher. **There are 100,000 U.S. troops in Asia** committed to defending Taiwan, Japan and South Korea, and **the U**nited **St**ates **would instantly** **become embroiled** if Beijing moved against Taiwan or North Korea attacked South Korea. While Washington has no defense commitments to either **India or Pakistan**, a conflict between the two **could end the** global **taboo against using nuclear weapons** and demolish the already shaky international nonproliferation regime. In addition, globalization has made a stable Asia \_ with its massive markets, cheap labor, exports and resources \_ indispensable to the U.S. economy. Numerous U.S. firms and millions of American jobs depend on trade with Asia that totaled $600 billion last year, according to the Commerce Department.

#### China will risk military conflict by asserting heg in the South China Sea - US leadership is key to solve

Dillon ‘11

[Dana R. Dillon is the author of The China Challenge (2007) and a frequent commentator on Asian and national security issues; non-staff member at the Heritage foundation. “Countering Beijing in the South China Sea.” Policy Review #167, The Hoover Institution @ Stanford University. <http://www.hoover.org/publications/policy-review/article/79931> ETB]

The most dangerous source of instability in Asia is a rising China seeking to reassert itself, and the place China is most likely to risk a military conflict is the South China Sea. In the second decade of the 21st century, the seldom-calm waters of the South China Sea are frothing from a combination of competing naval exercises and superheated rhetoric. Many pundits, politicians, and admirals see the South China Sea as a place of future competition between powers.¶ Speculation about impending frictions started at the July 2010 asean Regional Forum (arf) when U.S. Secretary of State Hillary Clinton delivered an overdue statement on American interests in the South China Sea. Clinton averred that the United States has a national interest in freedom of navigation in the South China Sea; that the U.S. supported a collaborative process in resolving the territorial disputes there; and that the U.S. supports the 2002 asean-China declaration on the conduct of parties in the South China Sea.¶ Despite Clinton’s statement of support for China’s own agreements with the Association of Southeast Asian Nations, China’s Foreign Ministry responded negatively, claiming that the secretary’s statement was “virtually an attack on China.” China’s military stated that it was opposed to “internationalization” of the six-country dispute and commenced a new and unusually large naval exercise in South China Sea the very next week.¶ This gathering maritime confrontation is instigated by China’s assertions of sovereignty over the entire South China Sea and its stated intention to enforce that sovereignty. But the source of China’s hubris is its view of its historic mandate to rule all under heaven. Extending China’s borders a thousand miles across the South China Sea is only one policy manifestation of this vision of a new Chinese world order. Consistent with its Sinocentric ideology, Beijing believes its authority over its smaller neighbors should include determining their foreign policy. After Clinton challenged China’s claim to the entire South China Sea, China’s foreign minister reportedly glared at a Singaporean diplomat and pronounced, “China is a big country and other countries are small countries, and that’s just a fact.”1 More telling of China’s opinion of its position among nations, the following Monday China’s Foreign Ministry posted a statement that “China’s view represented the interests of ‘fellow Asians.’”¶ The competing territorial claims in the South China Sea are decades old, but today the Chinese government is full of a sense of accomplishment and the People’s Liberation Army is flush with the fastest growing military budget in the world. Clinton’s statement may have been inspired by earlier statements by Clinton’s Chinese counterpart, the state councilor responsible for foreign affairs, Dai Bingguo, directly to Clinton herself and repeated to several U.S. aides that the enforcement of China’s sovereignty over the South China Sea was a “core interest” on par with Taiwan and Tibet. While Dai Bingguo reportedly has desisted from using the term “core interest” to describe China’s maritime sovereignty, personalities in China’s military still do. In January 2011 the web site of the People’s Daily, the official organ of the Chinese Communist party, surveyed readers about whether the South China Sea is China’s “core interest”; 97 percent of nearly 4,300 respondents said yes.2¶ Short of a shooting war, protecting freedom of navigation in one of the globe’s busiest sea lanes requires an amicable resolution of the competing territorial claims. Starting a process to resolve or neutralize the problem will require American leadership and resolve. Firm diplomacy backed by convincing naval power and patient leadership can strike a balance in the region that protects freedom of navigation, the integrity of international law, and the independence and sovereignty of Southeast Asia’s nations.¶ The worst solution to the South China Sea dispute from the U.S. point of view would be for China’s asean neighbors simply to acquiesce to Beijing’s position and for the entire South China Sea to become the sovereign territory of the People’s Republic of China (prc). The Beijing position is also the worst solution for the asean and every other trading nation on the planet. But an almost as bad solution is for the U.S. to become involved in a bilateral confrontation with China without the firm endorsement and commitment to American actions by the other littoral claimants and by America’s Asia-Pacific allies. Without the support of regional alliances, the U.S. would be entangled in a campaign at the far end of its logistical tail but deep inside the reach of a large and rising power.

#### High tensions make compromise unlikely - US leadership is key to forcing multilateral agreement

Clayton 8/24

[Marquis Clayton is a Research Assistant at the East-West Center in Washington. “Uncomfortable Truths: Breaking the Impasse in the South China Sea.” Asia Pacific Bulletin #178. ETB]

¶ The final uncomfortable truth is that historical animosities and increasingly emotional¶ resource nationalism are likely to make the situation worse, possibly much worse, before¶ it gets better. The primary reason is that political leaders in the claimant countries have¶ little incentive or capability to undertake the types of compromise which would be¶ required to resolve the disputes. In the Philippines, President Benigno Aquino has¶ staked out a much tougher stance on South China Sea issues than his predecessor’s¶ policies which he saw as weak and encouraging Chinese aggression. In the aftermath of¶ the incidents last year at Reed Bank and this year at both Scarborough and Half Moon¶ Shoals, he is unlikely to begin promoting a more conciliatory approach.¶ In Vietnam, public protests and opposition to concessions on territorial and sovereignty¶ disputes with China leave its leaders very little room to maneuver. Considering the¶ history of conflict between the two nations and recent disputes over arrests and¶ detentions of fishermen as well as drilling rights in contested areas, it is unlikely that¶ such public sentiment will be easy to reduce.¶ In China, the national leadership will be undergoing a major change for the first time in¶ a decade. The new incoming party secretary and president, Xi Jinping, will seek to¶ consolidate his power and is unlikely to make one of his first foreign policy initiatives a¶ weakening of China’s claims of sovereignty in the South China Sea, a move which¶ would face stiff opposition from the military and public. In short, without substantial¶ outside pressure to do so, claimant countries are not likely to soften their stances or¶ undertake major initiatives to improve the situation.¶ The United States is the only country with the ability to break this impasse. It is the only¶ party with the diplomatic, economic and military influence in the region to alter the¶ status quo in a positive manner as ASEAN has proven incapable of doing so, while¶ China has shown itself unwilling to do so. This means the United States must go even¶ further than it already has in laying out its interests in the future regional order and¶ guiding the various claimants through facing these uncomfortable truths and modifying¶ their current approaches to resolving the disputes. Other specific measures will include¶ increasing efforts to improve the capabilities of the Filipino and Vietnamese armed¶ forces to patrol and monitor their maritime peripheries.

#### Territorial disputes snowball - causes nuclear conflict

Chakraborty 10

(Tuhin Subhro Chakraborty, Research Associate at Rajiv Gandhi Institute for Contemporary Studies (RGICS), his primary area of work is centered on East Asia and International Relations. His recent work includes finding an alternative to the existing security dilemma in East Asia and the Pacific and Geo Political implications of the ‘Rise of China’. Prior to joining RGICS, he was associated with the Centre for Strategic Studies and Simulation, United Service Institution of India (USI) where he examined the role of India in securing Asia Pacific. He has coordinated conferences and workshops on United Nation Peacekeeping Visions and on China’s Quest for Global Dominance. He has written commentaries on issues relating to ASEAN, Asia Pacific Security Dilemma and US China relations. He also contributed in carrying out simulation exercise on the ‘Afghanistan Scenario’ for the Foreign Service Institute (FSI). Tuhin interned at the Indian Council of World Affairs (ICWA), Sapru House, wherein he worked on the Rise of People’s Liberation Army (PLA) military budget and its impact on India. He graduated from St. Stephen’s College, Delhi and thereafter he undertook his masters in East Asian Studies from University of Delhi. His areas of interest include China, India-Japan bilateral relations, ASEAN, Asia Pacific security dynamics and Nuclear Issues, The United States Service Institution of India, 2010, “The Initiation & Outlook of ASEAN Defence Ministers Meeting (ADMM) Plus Eight”, <http://www.usiofindia.org/Article/?pub=Strategic%20Perspective&pubno=20&ano=739>)

The first ASEAN Defence Ministers Meeting Plus Eight (China, India, Japan, South Korea, Australia, New Zealand, Russia and the USA) was held on the 12th of October. When this frame work of ADMM Plus Eight came into news for the first time it was seen as a development which could be the initiating step to a much needed security architecture in the Asia Pacific. Asia Pacific is fast emerging as the economic center of the world, consequently securing of vulnerable economic assets has becomes mandatory. The source of threat to economic assets is basically unconventional in nature like natural disasters, terrorism and maritime piracy. This coupled with the conventional security threats and flashpoints based on territorial disputes and political differences are very much a part of the region posing a major security challenge.¶ As mentioned ADMM Plus Eight can be seen as the first initiative on such a large scale where the security concerns of the region can be discussed and areas of cooperation can be explored to keep the threats at bay. The defence ministers of the ten ASEAN nations and the eight extra regional countries (Plus Eight) during the meeting have committed to cooperation and dialogue to counter insecurity in the region. One of the major reasons for initiation of such a framework has been the new face of threat which is non-conventional and transnational which makes it very difficult for an actor to deal with it in isolation. Threats related to violent extremism, maritime security, vulnerability of SLOCs, transnational crimes have a direct and indirect bearing on the path of economic growth. Apart from this the existence of territorial disputes especially on the maritime front plus the issues related to political differences, rise of China and dispute on the Korean Peninsula has aggravated the security dilemma in the region giving rise to areas of potential conflict. This can be seen as a more of a conventional threat to the region.¶ The question here is that how far this ADMM Plus Eight can go to address the conventional security threats or is it an initiative which would be confined to meetings and passing resolution and playing second fiddle to the ASEAN summit. It is very important to realize that when one is talking about effective security architecture for the Asia Pacific one has to talk in terms of addressing the conventional issues like the territorial and political disputes. These issues serve as bigger flashpoint which can snowball into a major conflict which has the possibility of turning into a nuclear conflict.

#### Risk of conflict is high - miscalc triggers escalation and US gets drawn in

Glaser ‘12

[Bonnie S. Glaser is a senior fellow with the Freeman Chair in China Studies and a senior associate with the Pacific Forum, Center for Strategic and International Studies. Council on Foreign Relations. <http://www.cfr.org/east-asia/armed-clash-south-china-sea/p27883> ETB]

The risk of conflict in the South China Sea is significant. China, Taiwan, Vietnam, Malaysia, Brunei, and the Philippines have competing territorial and jurisdictional claims, particularly over rights to exploit the region's possibly extensive reserves of oil and gas. Freedom of navigation in the region is also a contentious issue, especially between the United States and China over the right of U.S. military vessels to operate in China's two-hundred-mile exclusive economic zone (EEZ). These tensions are shaping—and being shaped by—rising apprehensions about the growth of China's military power and its regional intentions. China has embarked on a substantial modernization of its maritime paramilitary forces as well as naval capabilities to enforce its sovereignty and jurisdiction claims by force if necessary. At the same time, it is developing capabilities that would put U.S. forces in the region at risk in a conflict, thus potentially denying access to the U.S. Navy in the western Pacific.¶ Given the growing importance of the U.S.-China relationship, and the Asia-Pacific region more generally, to the global economy, the United States has a major interest in preventing any one of the various disputes in the South China Sea from escalating militarily.¶ The Contingencies¶ Of the many conceivable contingencies involving an armed clash in the South China Sea, three especially threaten U.S. interests and could potentially prompt the United States to use force.¶ The most likely and dangerous contingency is a clash stemming from U.S. military operations within China's EEZ that provokes an armed Chinese response. The United States holds that nothing in the United Nations Convention on the Law of the Sea (UNCLOS) or state practice negates the right of military forces of all nations to conduct military activities in EEZs without coastal state notice or consent. China insists that reconnaissance activities undertaken without prior notification and without permission of the coastal state violate Chinese domestic law and international law. China routinely intercepts U.S. reconnaissance flights conducted in its EEZ and periodically does so in aggressive ways that increase the risk of an accident similar to the April 2001 collision of a U.S. EP-3 reconnaissance plane and a Chinese F-8 fighter jet near Hainan Island. A comparable maritime incident could be triggered by Chinese vessels harassing a U.S. Navy surveillance ship operating in its EEZ, such as occurred in the 2009 incidents involving the USNS Impeccable and the USNS Victorious. The large growth of Chinese submarines has also increased the danger of an incident, such as when a Chinese submarine collided with a U.S. destroyer's towed sonar array in June 2009. Since neither U.S. reconnaissance aircraft nor ocean surveillance vessels are armed, the United States might respond to dangerous behavior by Chinese planes or ships by dispatching armed escorts. A miscalculation or misunderstanding could then result in a deadly exchange of fire, leading to further military escalation and precipitating a major political crisis. Rising U.S.-China mistrust and intensifying bilateral strategic competition would likely make managing such a crisis more difficult.¶ A second contingency involves conflict between China and the Philippines over natural gas deposits, especially in the disputed area of Reed Bank, located eighty nautical miles from Palawan. Oil survey ships operating in Reed Bank under contract have increasingly been harassed by Chinese vessels. Reportedly, the United Kingdom-based Forum Energy plans to start drilling for gas in Reed Bank this year, which could provoke an aggressive Chinese response. Forum Energy is only one of fifteen exploration contracts that Manila intends to offer over the next few years for offshore exploration near Palawan Island. Reed Bank is a red line for the Philippines, so this contingency could quickly escalate to violence if China intervened to halt the drilling.¶ The United States could be drawn into a China-Philippines conflict because of its 1951 Mutual Defense Treaty with the Philippines. The treaty states, "Each Party recognizes that an armed attack in the Pacific Area on either of the Parties would be dangerous to its own peace and safety and declares that it would act to meet the common dangers in accordance with its constitutional processes." American officials insist that Washington does not take sides in the territorial dispute in the South China Sea and refuse to comment on how the United States might respond to Chinese aggression in contested waters. Nevertheless, an apparent gap exists between American views of U.S. obligations and Manila's expectations. In mid-June 2011, a Filipino presidential spokesperson stated that in the event of armed conflict with China, Manila expected the United States would come to its aid. Statements by senior U.S. officials may have inadvertently led Manila to conclude that the United States would provide military assistance if China attacked Filipino forces in the disputed Spratly Islands.¶ With improving political and military ties between Manila and Washington, including a pending agreement to expand U.S. access to Filipino ports and airfields to refuel and service its warships and planes, the United States would have a great deal at stake in a China-Philippines contingency. Failure to respond would not only set back U.S. relations with the Philippines but would also potentially undermine U.S. credibility in the region with its allies and partners more broadly. A U.S. decision to dispatch naval ships to the area, however, would risk a U.S.-China naval confrontation.¶ Disputes between China and Vietnam over seismic surveys or drilling for oil and gas could also trigger an armed clash for a third contingency. China has harassed PetroVietnam oil survey ships in the past that were searching for oil and gas deposits in Vietnam's EEZ. In 2011, Hanoi accused China of deliberately severing the cables of an oil and gas survey vessel in two separate instances. Although the Vietnamese did not respond with force, they did not back down and Hanoi pledged to continue its efforts to exploit new fields despite warnings from Beijing. Budding U.S.-Vietnam relations could embolden Hanoi to be more confrontational with China on the South China Sea issue.¶ The United States could be drawn into a conflict between China and Vietnam, though that is less likely than a clash between China and the Philippines. In a scenario of Chinese provocation, the United States might opt to dispatch naval vessels to the area to signal its interest in regional peace and stability. Vietnam, and possibly other nations, could also request U.S. assistance in such circumstances. Should the United States become involved, subsequent actions by China or a miscalculation among the forces present could result in exchange of fire. In another possible scenario, an attack by China on vessels or rigs operated by an American company exploring or drilling for hydrocarbons could quickly involve the United States, especially if American lives were endangered or lost. ExxonMobil has plans to conduct exploratory drilling off Vietnam, making this an existential danger. In the short term, however, the likelihood of this third contingency occurring is relatively low given the recent thaw in Sino-Vietnamese relations. In October 2011, China and Vietnam signed an agreement outlining principles for resolving maritime issues. The effectiveness of this agreement remains to be seen, but for now tensions appear to be defused.¶ Warning Indicators¶ Strategic warning signals that indicate heightened risk of conflict include political decisions and statements by senior officials, official and unofficial media reports, and logistical changes and equipment modifications. In the contingencies described above, strategic warning indicators could include heightened rhetoric from all or some disputants regarding their territorial and strategic interests. For example, China may explicitly refer to the South China Sea as a core interest; in 2010 Beijing hinted this was the case but subsequently backed away from the assertion. Beijing might also warn that it cannot "stand idly by" as countries nibble away at Chinese territory, a formulation that in the past has often signaled willingness to use force. Commentaries and editorials in authoritative media outlets expressing China's bottom line and issuing ultimatums could also be a warning indicator. Tough language could also be used by senior People's Liberation Army (PLA) officers in meetings with their American counterparts. An increase in nationalistic rhetoric in nonauthoritative media and in Chinese blogs, even if not representing official Chinese policy, would nevertheless signal pressure on the Chinese leadership to defend Chinese interests. Similar warning indicators should be tracked in Vietnam and the Philippines that might signal a hardening of those countries' positions.¶ Tactical warning signals that indicate heightened risk of a potential clash in a specific time and place include commercial notices and preparations, diplomatic and/or military statements warning another claimant to cease provocative activities or suffer the consequences, military exercises designed to intimidate another claimant, and ship movements to disputed areas. As for an impending incident regarding U.S. surveillance activities, statements and unusual preparations by the PLA might suggest a greater willingness to employ more aggressive means to intercept U.S. ships and aircraft.

#### US-China war goes nuclear

Hunkovic 9

Lee J. Hunkovic -- professor at American Military University, 09, [“The Chinese-Taiwanese Conflict Possible Futures of a Confrontation between China, Taiwan and the United States of America”, American Military University, p.54]

A war between China, Taiwan and the United States has the potential to escalate into a nuclear conflict and a third world war, therefore, many countries other than the primary actors could be affected by such a conflict, including Japan, both Koreas, Russia, Australia, India and Great Britain, if they were drawn into the war, as well as all other countries in the world that participate in the global economy, in which the United States and China are the two most dominant members. If China were able to successfully annex Taiwan, the possibility exists that they could then plan to attack Japan and begin a policy of aggressive expansionism in East and Southeast Asia, as well as the Pacific and even into India, which could in turn create an international standoff and deployment of military forces to contain the threat. In any case, if China and the United States engage in a full-scale conflict, there are few countries in the world that will not be economically and/or militarily affected by it. However, China, Taiwan and United States are the primary actors in this scenario, whose actions will determine its eventual outcome, therefore, other countries will not be considered in this study.

### Nuclear Expertise

#### New US nuclear power demand causes nuclear expertise revival

**APS 8**

APS (American Physical Society), Report from the APS Panel on Public Affairs Committee on Energy and Environment, June 2008, Readiness of the U.S. Nuclear Workforce for 21st Century Challenges, http://www.aps.org/policy/reports/popa-reports/upload/Nuclear-Readiness-Report-FINAL-2.pdf

The 21st century has brought a growing realization that **it is time to reexamine the adequacy of the U.S. nuclear workforce and its ability to deal with many old and new challenges** our nation faces. This report draws attention to critical shortages in the U.S. nuclear workforce and to problems in maintaining relevant educational modalities and facilities for training new people. This workforce comprises nuclear engineers, nuclear chemists, radiochemists, health physicists, nuclear physicists, nuclear technicians, and those from related disciplines. **As a group they play critical roles in the nation’s nuclear power industry, in its nuclear weapons complex, in its defense against nuclear** and other forms of **terrorism**, and in several aspects of healthcare, industrial processing, and occupational health and safety. Each of these areas presents significantly more dramatic challenges than it did not very many years ago. Each is an important aspect of our national security.¶ Nuclear Power: Past and Present¶ **Workforce shortages** in the arena of commercial nuclear power, and the problem of maintaining modernized training facilities, mainly **stem from** the 30-year **stasis in U.S. demand for new civilian nuclear power plants**1. The number of operating civilian nuclear reactors in the U.S. has remained at about 100 during this time. Thus, U.S. vendors have been forced to look abroad for sales. **Some have** either **ceased construction of new reactors entirely** or else significantly scaled back business in this area. Their continuing, **largely static, nuclear engineering workforce needs have been met through** a combination of **hiring those trained in university** nuclear engineering **programs and retraining others whose original expertise was in some other field** (usually mechanical engineering). Retirees from the nuclear Navy also have played an important role.¶ **A natural result of this stasis was** for many years a greatly **reduced interest among undergraduates in nuclear science and engineering** programs2**. In turn, this put great pressure on U.S. universities to scale back in these areas**. Recently, however, the Federal government, through the Department of Energy (DOE), dramatically increased funding for these educational efforts. This played a major role in increasing undergraduate student enrollments in nuclear engineering from a low point of 480 in 1999 to 1,933 in 2007. Declaring the problem to be solved, DOE called for the termination of its university nuclear science and engineering programs for FY 2007. Congress in turn provided reduced funding for FY 2007 and transferred all the programs except reactor fuel services to the Nuclear Regulatory Commission (NRC) for FY 2008. These “feast or famine” gyrations have led to significant instabilities: the number of university nuclear engineering departments has decreased from 66 in the early 1980s to 30 today, and the number of university reactors has dwindled from 63 to 25 during essentially the same period.

#### Revitalized nuclear expertise vital to stockpile stewardship nuclear forensics

**Mtingwa, 9**

(Chair of the POPA study on the Readiness of the U.S. Nuclear Workforce for 21st Century Challenges. He is an accelerator physicist and Senior Lecturer at MIT. “Readiness of the U.S. Nuclear Workforce for 21st Century Challenges,” January, http://www.aps.org/units/fps/newsletters/200901/mtingwa.cfm)

On another front, the tragedy of September 11, 2001, has brought an intense focus on the issue of national preparedness against terrorism. For emergencies involving a terrorist action or an accident at a nuclear reactor, experts must be ready to respond. Thus it is important to attend to the nuclear workforce needs of the Department of Homeland Security, the Department of Defense, the NRC, and specialized areas of the Department of Energy. An important example of the latter is the Nuclear Emergency Support Team from DOE’s National Nuclear Security Administration that travels to the site of a suspected nuclear or radiological weapon to mitigate the situation. Thus, the nation will need to expand its nuclear workforce to initiate new efforts in nuclear forensics and other parts of the Homeland Security portfolio, and to replace many retiring members of the weapons workforce.¶ For many years, funding for U.S. university nuclear science and engineering research and education has been heavily dependent upon a single source: previously DOE and now the NRC. Therefore, it is no accident that the vitality of the nation’s university nuclear science and engineering education and infrastructure program closely tracked funding support provided by DOE over the last 15 years. As shown in Fig. 1, as DOE’s funding increased in the decade 1997 through 2007, undergraduate student enrollment in nuclear engineering increased – from a low of 480 students in 1999 to a high of 1,933 in 2007. For nuclear engineering students at minority-serving institutions, DOE support created new opportunities. While other factors also contributed to the dramatic increase in undergraduate enrollments, university administrators indicate that increases in Federal funding were indeed an important factor. In the aftermath of the accidents at Three Mile Island in 1979 and Chernobyl in 1986, DOE support for nuclear science and engineering education declined precipitously as industry construction of new plants ceased and student interest and career opportunities declined. In 1997, the President’s Committee of Advisors on Science and Technology issued a report that urged President Clinton to reinvest in university nuclear science and engineering research and education . PCAST also urged him to establish the Nuclear Energy Research Advisory Committee to provide advice to DOE on this reinvestment. In the mid-1990s, the Clinton Administration recognized the potential for a resurgence in nuclear technology, and constituted NERAC in 1998 to advise DOE as it began reinvesting both funds and management attention to rebuilding the educational infrastructure for nuclear science and engineering. This support was implemented by creating a suite of eleven targeted programs, among which perhaps the most influential was the Innovations in Nuclear Infrastructure and Education (INIE) program, which encouraged the development of strategic consortia among universities, DOE national laboratories, and industry.¶ When DOE released its FY2007 budget request, it announced that it had completed its mission in the area of nuclear science and engineering education and made plans to terminate the program. DOE proposed essentially zero funding for nuclear science and engineering education for both FY2007 and FY2008. This signaled a significant reversal of fortune not seen since the early 1990s. DOE proposed to return to the practice of those years by providing only basic fuel services for university research reactors under a new infrastructure program. In FY2007, Congress rejected DOE’s proposal to terminate the program and instead provided $16.5 million – far less than the $27 million the program received in FY2006. In FY2008, Congress again rejected ending the program and allocated $17.9 million in the FY2008 Consolidated Appropriations Act. Of this amount, $2.9 million remained at DOE for university reactor fuel services, and Congress transferred to the NRC $15 million for the rest of the programs. While these funds would defer to some extent the erosion of nuclear science and engineering education in the U.S., they are not sufficient to maintain vital elements of the nation’s programs, particularly the highly successful INIE program. It was last funded in FY2006. As for nuclear chemistry and radiochemistry, these are two fields that overlap in many ways. Simply put, radiochemistry is the study of radioactive elements using chemical techniques, focusing on their radioactive characteristics. Nuclear chemistry is the study of the fundamental properties of nuclei, both radioactive and non-radioactive, using chemical techniques. It is quite close to the field of nuclear physics.¶ There has been a continuing dramatic decrease in the number of Ph.D.s earned annually in nuclear chemistry, as shown in Fig. 2. It reflects the fact that only a handful of U.S. university chemistry departments currently have professors with active research programs in nuclear chemistry. Thus, advanced education in nuclear chemistry education is all but extinct in the United States. If nuclear chemistry and radiochemistry education programs are not reinvigorated, the U.S. will lack the expertise required to pursue promising advanced R&D in a myriad of disciplines. In addition to processing both fresh and spent fuel for nuclear reactors, including basic research on spent fuel separations and transmutation technologies, nuclear chemistry and radiochemistry are also extremely important to the nation’s security and health in the following cross-cutting roles: (1) **nuclear weapons stockpile stewardship**, (2) **nuclear forensics and surveillance of clandestine nuclear activities**, (3) monitoring of radioactive elements in the environment, (4) production of radioisotopes, and (5) **preparation of radiopharmaceuticals for therapeutic and diagnostic medical applications.**¶ When considering the nuclear enterprise, the status of the health physics workforce and its training facilities must be considered. For occupational safety and the protection of the public, health physics professionals are employed in many sectors, including the commercial nuclear power industry, DOE’s national laboratories, homeland security, the NRC, the military and medical facilities.¶ The nation’s health physics capabilities will be impacted negatively over the next decade due to the number of expected retirements, coupled with inadequate numbers of graduates entering the field. Fig. 3 provides data on health physics graduates. Considering that the retirement rate of health physicists in the U.S. is roughly 200 per year , the number of health physics graduates does not allow for much increase in the demand for their services.¶ Turning to university research and training reactors, their number has decreased from 63 in the late 1970’s to 25 today. Recently a number of them have been decommissioned, including those at Cornell University and the University of Michigan. During FY2006, DOE’s INIE Program provided $9.41 million to six consortia consisting of both the higher power (usually 1 MW and above) research reactors as well as the lower power (usually less than 1 MW) training reactors. Research reactors mainly perform state-of-the-art experiments and provide irradiation services for private industry and other researchers. Training reactors mainly provide hands-on experiences for students. The INIE program had numerous significant successes, including helping to increase the number of students studying nuclear science and engineering, stimulating the hiring of new tenure-track faculty, providing seed money for a number of major infrastructure and instrumentation purchases and upgrades, fostering collaborations among members of each consortium and with national laboratories, freeing a number of university reactors from threats of decommissioning, assisting with the establishment of a nuclear technology Associate’s degree program at Linn State Technical College in Missouri, and helping to establish a new undergraduate nuclear engineering program at South Carolina State University, one of the Historically Black Colleges and Universities . That program is the first to be created in over a quarter-century at any U.S. university and is the only undergraduate nuclear engineering program located at an HBCU . Nuclear physicists are an indispensable part of the workforce, since a wealth of high precision actinide fission and neutron capture cross section data is needed to support the design of future nuclear reactors, including advanced light water reactors and Generation IV systems . Without such data, simulation studies would not be accurate enough to lead to reliable designs and conclusions . From their systems analyses, DOE researchers have identified the cross sections of particular importance. The U.S. has neutron source facilities, such as the Los Alamos Neutron Science Center, that can be used for many of the cross section measurements, and capabilities not present in the U.S. usually can be found elsewhere . Many of the cross section measurements are extremely challenging and entirely new techniques need to be developed. Moreover, much more fundamental work is needed to understand the basic physics of nuclear isotopes and their various cross sections. A better theoretical understanding would reduce the uncertainties in many applications. All of these issues are fertile ground for Ph.D. research.¶ Next, to evaluate the supply of nuclear engineers with at least a Bachelor’s degree that is needed for nuclear power generation between now and 2050, it is useful to consider three scenarios: (1) maintaining the current number of nuclear reactors (about 100) without reprocessing, (2) doubling the number of reactors without reprocessing fuel, and (3) doubling the number of reactors while closing the fuel cycle by reprocessing and recycling spent fuel.¶ Due to the shortage of nuclear engineers over recent decades, reactor vendors have resorted to hiring far more mechanical engineers than nuclear engineers and providing them with nuclear-related training. With approximately 35% of nuclear workers reaching retirement age in the next five years , industry will likely see some increase in engineering hiring across the board. This will heighten demands for nuclear engineering education, whether supplied by university programs or by the employers themselves. Scenario 1 has a chance of being sustainable. On the other hand, **doubling the number of nuclear reactors to about 200 by 2050 will require a significant augmentation of the nuclear workforce**. Vendors, utilities, and the NRC will need to increase their ranks by about 300 engineers with some nuclear training per year, plus replace retirees. This **growth in manpower is a direct result of what would be an increasing demand for significantly improved reactor designs, increased reactor operations at the utilities**, and a much greater oversight burden at the NRC. On the other hand, the number of new nuclear engineering graduates at all degree levels entering nuclear employment is about 160. Hence, assuming that the supply of nuclear engineers coming from university training programs follows recent trends, employers will need to train significantly more non-nuclear engineers to do nuclear engineering tasks than they do now. It is doubtful that the massive reactor building campaigns necessary to double the number of reactors by 2050 could thrive under such a burden. The clear message is that **our capability for university-based training of nuclear scientists and engineers cannot be allowed to diminish further.** Scenario 3 is the most problematic. This scenario has all the workforce challenges of Scenario 2, plus the need for highly trained nuclear chemists and radiochemists who are indispensable for reprocessing. Unlike France, the U.S. has no governmental agency charged with educating nuclear chemists and radiochemists. Those wanting to pursue these fields are educated under faculty mentors at universities. The growing scarcity of such mentors has thus led to a crisis in the U.S. In the long haul, **the U.S. will lose ground in its R&D on many fronts,** including devising more efficient and safer methods of processing both fresh and spent fuels for all future nuclear energy scenarios. Nuclear chemists and radiochemists with Ph.D.s would be needed to train the large cadre of radiochemical technicians who would carry out most of this work, and they would be needed at universities and national laboratories to spearhead the research that leads to breakthrough radiochemical technologies. Thus, any venture into spent fuel reprocessing, and fulfilling nuclear chemists’ and radiochemists’ many other cross-cutting roles in such areas as homeland security and public health, **will not be possible unless expertise is imported from abroad**. This modality is made much more difficult by the requirement that **many of these workers must be U.S. citizens**. In the U.S., market-driven forces will not be able to produce additional domestically trained nuclear chemists and radiochemists if the educational infrastructure continues to disappear.Aside from nuclear power, the nation will continue to need a significant number of talented, well-trained nuclear scientists and engineers to maintain the strength of its homeland security and nuclear weapons programs. These complexes must be safeguarded, and this is a clear responsibility of the Federal government. To satisfy these and nuclear power’s demands on the nuclear workforce, the Federal government should stabilize the long-term funding and management of nuclear science and engineering education programs, in particular for the university research and training reactor facilities. The number of nuclear engineering departments and university reactors should not be allowed to diminish further. Also, existing reactors could be utilized more optimally by expanding distance-learning opportunities. As for nuclear chemistry and radiochemistry, there is a huge need for the Federal government to establish a cross-cutting workforce initiative that includes fellowships and scholarships for students, support for postdoctoral researchers, incentives that stimulate industrial support of faculty positions, effective means of outreach to the general public, and increased support for summer schools in these disciplines. For health physics, the Federal government should ensure that there is a sufficient number of faculty with nuclear reactor-related experience to train the necessary numbers of health physicists for the nuclear power and other industries. Finally, the Federal government should increase support for research on the fundamental physics and chemistry of actinide fission and neutron capture. There is also an educational role for private industry. Nuclear vendors and utilities should expand undergraduate student internships, graduate student traineeships, cooperative education opportunities, and training on reactor simulators at their facilities. To conclude, creating new reactor designs, revolutionary medical applications of radiation, and many other nuclear endeavors present exciting challenges. As such, the nuclear science and engineering community should develop programs to **encourage the general public to view these fields as exciting areas of research** that present intellectually and financially rewarding career paths.

#### Key to credible nuclear deterrence

**Browne et al 8**

John C. Browne, Los Alamos National Laboratory (retired), Clark Murdock, Center for Strategic and International Studies, Francis Slakey, American Physical Society, Benn Tannenbaum, American Association for the Advancement of Science, Jessica Yeats, Center for Strategic and International Studies, December 2008, Nuclear Weapons in 21st Century U.S. National Security, http://csis.org/files/media/csis/pubs/081208\_nuclear\_weapons\_report.pdf

**To maintain a credible nuclear deterrent, the U**nited **S**tates **should sustain** the **necessary human capital**: **as** much of **the** existing **workforce ages,** experience, **expertise and competence will** likely **decline across the nuclear enterprise** including the Department of Defense (DOD), Department of Energy (DOE), and the military services. A broader mission for the nuclear weapons labs that addresses **energy security** as well as nuclear security interests **can help recruit, retain, and sustain highly skilled and motivated scientists and engineers**.

#### Loss of U.S. nuclear primacy causes global nuclear war

Caves 10

(John P, Senior Research Fellow in the Center for the Study of Weapons of Mass Destruction at the National Defense University, January, Strategic Forum, No. 252, “Avoiding a Crisis of Confidence in the U.S. Nuclear Deterrent,”)

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

#### Effective nuclear forensics deters terrorism

**Talmadge 7**

(IR & Government Prof-George Washington, PhD-MIT, “Deterring a Nuclear 9/11, Spring, www.twq.com/07spring/docs/07spring\_talmadge.pdf)

Because terrorists lack return addresses, analysts have dismissed even more firmly the possibility of deterrence by punishment, or the threat to impose un­bearable costs on those who would do the United States harm. This disheart­ening conclusion stems from a failure to appreciate the many steps terrorists must take before committing an actual attack. Many of these steps depend on assistance from people and organizations that may not be as impervious to deterrence by punishment as individual terrorists are. If the United States can broaden the range of actors it seeks to deter and convince these other actors that cooperating with terrorists is not in their interests, it may be able to re­duce the likelihood of a terrorist attack substantially.13 Nowhere is this approach more plausible than in the case of nuclear terror­ism.14 Unlike other forms of terrorism in which terrorists are more or less self-sufficient, it is virtually impossible for terrorists to create their own nuclear material, regardless of which ingredient they use. Producing plutonium requires sophisticated, expensive reactors, as well as reprocessing facili­ties. Enriching uranium to a weapons-grade lev­el can be done through several techniques; all require relatively large buildings and advanced technologies.15 Both paths to nuclear material require a sizable and scientifically knowledge­able labor force, significant industrial resources, and time. Weapons design and delivery pose additional obstacles. States such as Argentina, Iran, Iraq, and Libya have tried to produce nuclear weapons and failed. Aum Shinrikyo, one of the best-funded terrorists groups in history and instigator of the 1995 sarin gas attacks in Tokyo, was also unable to create its own nuclear material and had to attempt to buy it from Russia.16 As such, it is extremely likely that states or substate military organizations would have to be involved in the tacit or overt provision of nuclear material to terrorists. A state could directly and deliberately transfer a weapon or materi­als to terrorists. It could refuse to halt or punish those in the military or sci­entific community who sell material or weapons to terrorists. It could willfully neglect nuclear security or choose not to alert the international community to suspected thefts of material or weapons. It could turn a blind eye to terrorist activities occurring on its territory. In all of these cases, the United States does have a target against which it can direct threats of retaliation: the governments or military and scientific establishments that actively or passively assist aspiring nuclear terrorists. Even if the United States cannot deter individual terrorists, it can create strong incentives for these other actors to block terrorist acquisition of the ingredi­ents required for a nuclear attack. They have addresses, lives, and property that the United States can hold hostage to their wholehearted cooperation. As Paul Davis and Brian Jenkins of RAND have argued, “The United States could announce credibly that … it would punish not only active supporters, but even those states and factions that merely tolerate the terrorists or indi­rectly facilitate their acquisition of [weapons of mass destruction (WMD)]. The purpose would be to so alarm heads of state and heads of substate organi zations that they would work actively to get rid of elements that might bring destruction down upon them.”17 Bush threatened as much after the North Korean test, warning that the Unit­ed States would hold the regime “fully accountable” if it passed nuclear materi­als or weapons to terrorists.18 The 2006 version of the U.S. National Security Strategy reflects a similar logic, suggesting a subtle shift from the 2002 docu­ment. In describing “a new deterrence calculus,” the current strategy declares, “States that harbor and assist terrorists are as guilty as the terrorists, and they will be held to account.” That document, along with analysts such as Gallucci who argue that a form of “expanded deterrence” against nuclear terrorism is possible, points to the crucial importance of being able to “define the nature and source of a terrorist-employed WMD. Should a WMD terrorist attack occur, the rapid identification of the source and perpetrator of an attack will enable our response efforts and may be critical in disrupting follow-on attacks.”19 In other words, nuclear forensics is the linchpin of any attempt at a deter­rence-by-punishment strategy against governments, militaries, or other orga­nizations that might actively or passively assist terrorists in a nuclear attack on the United States.20

#### Risks nuclear use**Us Russia** Joint Threat Assessment May 11

http://belfercenter.ksg.harvard.edu/files/Joint-Threat-Assessment%20ENG%2027%20May%202011.pdf

 ABOUT THE U.S.-RUSSIA JOINT THREAT ASSESSMENT ON NUCLEAR TERRORISM The U.S.-Russia Joint Threat Assessment on Nuclear Terrorism is a collaborative project of Harvard University’s Belfer Center for Science and International Affairs and the U.S.A. and Canada Studies Institute of the Russian Academy of Sciences led by Rolf Mowatt-Larssen and Pavel Zolotarev. Authors: • Matthew Bunn. Associate Professor of Public Policy at Harvard Kennedy School and Co-Principal Investigator of Project on Managing the Atom at Harvard University’s Belfer Center for Science and International Affairs. • Colonel Yuri Morozov (retired Russian Armed Forces). Professor of the Russian Academy of Military Sciences and senior fellow at the U.S.A and Canada Studies Institute of the Russian Academy of Sciences, chief of department at the General Staff of the Russian Armed Forces, 1995–2000. • Rolf Mowatt-Larssen. Senior fellow at Harvard University’s Belfer Center for Science and International Affairs, director of Intelligence and Counterintelligence at the U.S. Department of Energy, 2005–2008. • Simon Saradzhyan. Fellow at Harvard University’s Belfer Center for Science and International Affairs, Moscow-based defense and security expert and writer, 1993–2008. • William Tobey. Senior fellow at Harvard University’s Belfer Center for Science and International Affairs and director of the U.S.-Russia Initiative to Prevent Nuclear Terrorism, deputy administrator for Defense Nuclear Nonproliferation at the U.S. National Nuclear Security Administration, 2006–2009. • Colonel General Viktor I. Yesin (retired Russian Armed Forces). Senior fellow at the U.S.A and Canada Studies Institute of the Russian Academy of Sciences and advisor to commander of the Strategic Missile Forces of Russia, chief of staff of the Strategic Missile Forces, 1994–1996. • Major General Pavel S. Zolotarev (retired Russian Armed Forces). Deputy director of the U.S.A and Canada Studies Institute of the Russian Academy of Sciences and head of the Information and Analysis Center of the Russian Ministry of Defense, 1993–1997, deputy chief of staff of the Defense Council of Russia, 1997–1998. Contributor: • Vladimir Lukov, director general of autonomous non-profit organization “Counter-Terrorism Center.”

**The expert community distinguishes pathways terrorists might take to the bomb** (discussed in detail in the next section of the report). **One is the use of a nuclear weapon that has been either stolen or bought on the black market**. The probability of such a development is very low, given the high levels of physical security (guards, barriers, and the like) and technical security (electronic locks and related measures) of modern nuclear warheads. But **we cannot entirely rule out such a scenario**, especially **if we recall the political instability in Pakistan**, where the situation could conceivably develop in a way that would increase the chance that **terrorist groups might gain access to a Pakistani nuclear weapon** **A second pathway is the use of an improvised nuclear device built either by terrorists or by nuclear specialists that the terrorists have secretly recruited, with use of weapons-usable fissile material either stolen or bought on the black market**.1 The probability of such an attack is higher than using stolen nuclear warheads, because **the acceleration of technological progress and globalization of information space make nuclear weapons technologies more accessible while the existence of the nuclear black market eases access of terrorists to weapons-usable fissile materials**. A third pathway is the use of an explosive nuclear device built by terrorists or their accomplices with fissile material that they produced themselves—either highly enriched uranium (HEU) they managed to enrich, or plutonium they managed to produce and reprocess. Al-Qaeda and associated groups appear to have decided that enriching uranium lies well beyond the capabilities that they would realistically be able to develop. **A fourth pathway is that terrorists might receive a nuclear bomb or the materials needed to make one from a state. North Korea**, for example, **has been willing to sell its missile technology to many countries**, and transferred its plutonium production reactor technology to Syria, **suffering few consequences** as a result. Transferring the means to make a nuclear bomb to a terrorist group, however, would be a dramatically different act, for the terrorists might use that capability in a way that could provoke retaliation that would result in the destruction of the regime. **A far more worrisome transfer of capability from state to group could occur without the witting cooperation of the regime**. **A future A.Q. Khan-type** rogue nuclear supplier network operating out of North Korea or out of a future nuclear-armed Iran **could potentially transfer such a capability to a surrogate group and/or sell it for profit to the highest bidder. Global trends make nuclear terrorism a real threat**. Although the international community has recognized the dangers of nuclear terrorism, it has yet to develop a comprehensive strategy to lower the risks of nuclear terrorism. Major barriers include complacency about the threat and the adequacy of existing nuclear security measures; secrecy that makes it difficult for states to share information and to cooperate; political disputes; competing priorities; lack of funds and technical expertise in some countries; bureaucratic obstacles; and the sheer difficulty of preventing a potentially small, hard-to-detect team of terrorists from acquiring a small, hard-to-detect chunk of nuclear material with which to manufacture a crude bomb. These barriers must not be allowed to stand in the way of the panhuman universal priority of preventing this grave threat from materializing. If current approaches toward eliminating the threat are not replaced with a sense of urgency and resolve, the question will become not if, but when**, where, and on what scale the first act of nuclear terrorism occurs**.

#### Extinction

Ayson 10

Robert Ayson, Professor of Strategic Studies and Director of the Centre for Strategic Studies: New Zealand at the Victoria University of Wellington, 2010 (“After a Terrorist Nuclear Attack: Envisaging Catalytic Effects,” Studies in Conflict & Terrorism, Volume 33, Issue 7, July, Available Online to Subscribing Institutions via InformaWorld)

But these two nuclear worlds—a non-state actor nuclear attack and a catastrophic interstate nuclear exchange—are not necessarily separable. It is just possible that some sort of terrorist attack, and especially **an act of nuclear terrorism, could precipitate a chain of events leading to a massive exchange of nuclear weapons between two or more of the states that possess them**. In this context, today’s and tomorrow’s terrorist groups might assume the place allotted during the early Cold War years to new state possessors of small nuclear arsenals who were seen as raising the risks of a catalytic nuclear war between the superpowers started by third parties. These risks were considered in the late 1950s and early 1960s as concerns grew about nuclear proliferation, the so-called n+1 problem. It may require a considerable amount of imagination to depict an especially plausible situation where an act of nuclear terrorism could lead to such a massive inter-state nuclear war. For example, in the event of a terrorist nuclear attack on the United States, it might well be wondered just how Russia and/or China could plausibly be brought into the picture, not least because they seem unlikely to be fingered as the most obvious state sponsors or encouragers of terrorist groups. They would seem far too responsible to be involved in supporting that sort of terrorist behavior that could just as easily threaten them as well. Some possibilities, however remote, do suggest themselves. For example, **how might the United States react if it was thought or discovered that the fissile material used in the act of nuclear terrorism had come from Russian stocks**,40 and if for some reason Moscow denied any responsibility for nuclear laxity? The correct attribution of that nuclear material to a particular country might not be a case of science fiction given the observation by Michael May et al. that **while the debris resulting from a nuclear explosion would be “spread over a wide area in tiny fragments, its radioactivity makes it detectable, identifiable and collectable, and a wealth of information can be obtained from its analysis: the efficiency of the explosion, the materials used and, most important … some indication of where the nuclear material came from**.”41 Alternatively, **if the act of nuclear terrorism came as a complete surprise, and American officials refused to believe that a terrorist group was fully responsible** (or responsible at all) **suspicion would shift immediately to state possessors**. Ruling out Western ally countries like the United Kingdom and France, and probably Israel and India as well, authorities in Washington would be left with a very short list consisting of North Korea, perhaps Iran if its program continues, and possibly Pakistan. But at what stage would Russia and China be definitely ruled out in this high stakes game of nuclear Cluedo? In particular, **if the act of nuclear terrorism occurred against a backdrop of existing tension in Washington’s relations with Russia and/or China, and at a time when threats had already been traded between these major powers, would officials and political leaders not be tempted to assume the worst?** Of course, **the chances of this occurring would only seem to increase if the United States was already involved in some sort of limited armed conflict with Russia and/or China, or if they were confronting each other from a distance in a proxy war**, as unlikely as these developments may seem at the present time. The reverse might well apply too: should a nuclear terrorist attack occur in Russia or China during a period of heightened tension or even limited conflict with the United States, could Moscow and Beijing resist the pressures that might rise domestically to consider the United States as a possible perpetrator or encourager of the attack? **Washington’s early response to a terrorist nuclear attack on its own soil might also raise the possibility of an unwanted (and nuclear aided) confrontation with Russia and/or China**. For example, **in the noise and confusion during the immediate aftermath of the terrorist nuclear attack, the U.S. president might be expected to place the country’s armed forces, including its nuclear arsenal, on a higher stage of alert. In such a tense environment, when careful planning runs up against the friction of reality, it is just possible that Moscow and/or China might mistakenly read this as a sign of U.S. intentions to use force** (and possibly **nuclear force) against them**. In that situation, the temptations to preempt such actions might grow, although it must be admitted that any preemption would probably still meet with a devastating response.

### Solvency

#### DoD acquisition of SMR’s ensures rapid military adoption, commercialization, and U.S. leadership

Andres and Breetz 11

Richard Andres, Professor of National Security Strategy at the National War College and a Senior Fellow and Energy and Environmental Security and Policy Chair in the Center for Strategic Research, Institute for National Strategic Studies, at the National Defense University, and Hanna Breetz, doctoral candidate in the Department of Political Science at The Massachusetts Institute of Technology, Small Nuclear Reactorsfor Military Installations:Capabilities, Costs, andTechnological Implications, [www.ndu.edu/press/lib/pdf/StrForum/SF-262.pdf](http://www.ndu.edu/press/lib/pdf/StrForum/SF-262.pdf)

Thus far, this paper has reviewed two of DOD’s most pressing energy vulnerabilities—grid insecurity and fuel convoys—and explored how they could be addressed by small reactors. We acknowledge that there are many uncertainties and risks associated with these reactors. On the other hand, failing to pursue these technologies raises its own set of risks for DOD, which we review in this section: first, small reactors may fail to be commercialized in the United States; second, the designs that get locked in by the private market may not be optimal for DOD’s needs; and third, expertise on small reactors may become concentrated in foreign countries. By taking an early “first mover” role in the small reactor market, DOD could mitigate these risks and secure the long-term availability and appropriateness of these technologies for U.S. military applications. The “Valley of Death.” Given the promise that small reactors hold for military installations and mobility, DOD has a compelling interest in ensuring that they make the leap from paper to production. However, if DOD does not provide an initial demonstration and market, there is a chance that the U.S. small reactor industry may never get off the ground. The leap from the laboratory to the marketplace is so difficult to bridge that it is widely referred to as the “Valley of Death.” Many promising technologies are never commercialized due to a variety of market failures— including technical and financial uncertainties, information asymmetries, capital market imperfections, transaction costs, and environmental and security externalities— that impede financing and early adoption and can lock innovative technologies out of the marketplace. 28 In such cases, the Government can help a worthy technology to bridge the Valley of Death by accepting the first mover costs and demonstrating the technology’s scientific and economic viability.29 [FOOTNOTE 29: There are numerous actions that the Federal Government could take, such as conducting or funding research and development, stimulating private investment, demonstrating technology, mandating adoption, and guaranteeing markets. Military procurement is thus only one option, but it has often played a decisive role in technology development and is likely to be the catalyst for the U.S. small reactor industry. See Vernon W. Ruttan, Is War Necessary for Economic Growth? (New York: Oxford University Press, 2006); Kira R. Fabrizio and David C. Mowery, “The Federal Role in Financing Major Inventions: Information Technology during the Postwar Period,” in Financing Innovation in the United States, 1870 to the Present, ed. Naomi R. Lamoreaux and Kenneth L. Sokoloff (Cambridge, MA: The MIT Press, 2007), 283–316.] Historically, nuclear power has been “the most clear-cut example . . . of an important general-purpose technology that in the absence of military and defense related procurement would not have been developed at all.”30 Government involvement is likely to be crucial for innovative, next-generation nuclear technology as well. Despite the widespread revival of interest in nuclear energy, Daniel Ingersoll has argued that radically innovative designs face an uphill battle, as “the high capital cost of nuclear plants and the painful lessons learned during the first nuclear era have created a prevailing fear of first-of-a-kind designs.”31 In addition, Massachusetts Institute of Technology reports on the Future of Nuclear Power called for the Government to provide modest “first mover” assistance to the private sector due to several barriers that have hindered the nuclear renaissance, such as securing high up-front costs of site-banking, gaining NRC certification for new technologies, and demonstrating technical viability.32 It is possible, of course, that small reactors will achieve commercialization without DOD assistance. As discussed above, they have garnered increasing attention in the energy community. Several analysts have even argued that small reactors could play a key role in the second nuclear era, given that they may be the only reactors within the means of many U.S. utilities and developing countries.33 However, given the tremendous regulatory hurdles and technical and financial uncertainties, it appears far from certain that the U.S. small reactor industry will take off. If DOD wants to ensure that small reactors are available in the future, then it should pursue a leadership role now. Technological Lock-in. A second risk is that if small reactors do reach the market without DOD assistance, the designs that succeed may not be optimal for DOD’s applications. Due to a variety of positive feedback and increasing returns to adoption (including demonstration effects, technological interdependence, network and learning effects, and economies of scale), the designs that are initially developed can become “locked in.”34 Competing designs—even if they are superior in some respects or better for certain market segments— can face barriers to entry that lock them out of the market. If DOD wants to ensure that its preferred designs are not locked out, then it should take a first mover role on small reactors. It is far too early to gauge whether the private market and DOD have aligned interests in reactor designs. On one hand, Matthew Bunn and Martin Malin argue that what the world needs is cheaper, safer, more secure, and more proliferation-resistant nuclear reactors; presumably, many of the same broad qualities would be favored by DOD.35 There are many varied market niches that could be filled by small reactors, because there are many different applications and settings in which they can be used, and it is quite possible that some of those niches will be compatible with DOD’s interests.36 On the other hand, DOD may have specific needs (transportability, for instance) that would not be a high priority for any other market segment. Moreover, while DOD has unique technical and organizational capabilities that could enable it to pursue more radically innovative reactor lines, DOE has indicated that it will focus its initial small reactor deployment efforts on LWR designs.37 If DOD wants to ensure that its preferred reactors are developed and available in the future, it should take a leadership role now. Taking a first mover role does not necessarily mean that DOD would be “picking a winner” among small reactors, as the market will probably pursue multiple types of small reactors. Nevertheless, DOD leadership would likely have a profound effect on the industry’s timeline and trajectory. Domestic Nuclear Expertise. From the perspective of larger national security issues, if DOD does not catalyze the small reactor industry, there is a risk that expertise in small reactors could become dominated by foreign companies. A 2008 Defense Intelligence Agency report warned that the United States will become totally dependent on foreign governments for future commercial nuclear power unless the military acts as the prime mover to reinvigorate this critical energy technology with small, distributed power reactors.38 Several of the most prominent small reactor concepts rely on technologies perfected at Federally funded laboratories and research programs, including the Hyperion Power Module (Los Alamos National Laboratory), NuScale (DOE-sponsored research at Oregon State University), IRIS (initiated as a DOE-sponsored project), Small and Transportable Reactor (Lawrence Livermore National Laboratory), and Small, Sealed, Transportable, Autonomous Reactor (developed by a team including the Argonne, Lawrence Livermore, and Los Alamos National Laboratories). However, there are scores of competing designs under development from over a dozen countries. If DOD does not act early to support the U.S. small reactor industry, there is a chance that the industry could be dominated by foreign companies. Along with other negative consequences, the decline of the U.S. nuclear industry decreases the NRC’s influence on the technology that supplies the world’s rapidly expanding demand for nuclear energy. Unless U.S. companies begin to retake global market share, in coming decades France, China, South Korea, and Russia will dictate standards on nuclear reactor reliability, performance, and proliferation resistance.

#### Military procurement solves commercial use and avoids regulations

Andres and Loudermilk 10

(Richard B. Andres, Professor of ¶ national Security Strategy at the ¶ national War College and a Senior fellow and energy and environmental ¶ Security and Policy Chair in the Center ¶ for Strategic research, institute for national Strategic Studies, at the national Defense University, Micah J, Research Associate for the Energy & Environmental Security Policy program with the Institute for National Strategic Studies at National Defense University, “Small Reactors and the Military’s Role in Securing America’s Nuclear IndustryPosted” <http://robertmayer.wordpress.com/2010/08/28/small-reactors-and-the-militarys-role-in-securing-americas-nuclear-industryposted/>, SEH)

Unlike private industry, **the military does not face the same regulatory and congressional hurdles to constructing reactors and would have an easier time in adopting them for use**. **By integrating small nuclear reactors as power sources for domestic U.S. military bases, three potential energy dilemmas are solved at the same time**. First, by incorporating small reactors at its bases, **the military addresses its own energy security quandary**. **The military has recently sought to “island” its bases in the U.S. -protecting them from grid outages**, be they accidental or intentional. **The Department of Defense has promoted this endeavor through lowering energy consumption on bases and searching for renewable power alternatives, but these measures alone will prove insufficient**. **Small reactors provide sufficient energy output to power military installations** and in some cases surrounding civilian population centers.¶ **Secondly, as the reactors become integrated on military facilities, the stigma on the nuclear power industry will ease and inroads will be created for the adoption of small-scale reactors as a viable source of energy. Private industry and the public will see that nuclear reactors can indeed be utilized safely and effectively, resulting in a renewed push toward the expansion of nuclear power**. Although many of the same hurdles will still be in place, **a shift in public opinion and a stronger effort by utilities, coupled with the demonstrated success of small reactors on military bases, could prove the catalysts necessary for the federal government and the NRC to take more aggressive action**.¶ Finally, while new reactors are not likely in the near future**, the military’s actions will preserve, for a while longer, the badly ailing domestic nuclear energy industry. Nuclear power is here to stay around the globe, and the United States has an opportunity to take a leading role in supplying the world’s nuclear energy and reactor technology.** With the U.S. nuclear industry dormant for three decades, much of the attention, technology, and talent have concentrated overseas in countries with a strong interest in nuclear technology. **Without the United States as a player in the nuclear energy market, it has little say over safety regulations of reactors or the potential risks of proliferation from the expansion of nuclear energy. If the current trend continues, the U.S. will reach a point where it is forced to import nuclear technology and reactors from other countries. Action by the military to install reactors on domestic bases will both guarantee the survival of the American nuclear industry in the short term, and work to solidify support for it in the long run.**¶ Ultimately**, between small-scale nuclear reactors and the U.S. military, the capability exists to revitalize America’s sleeping nuclear industry and promoting energy security and clean energy production**. The reactors offer the ability to power domestic military bases, small towns, and other remote locations detached from the energy grid. Furthermore, reactor sites can house multiple units, allowing for greater energy production – rivaling even large reactors. **Small reactors offer numerous benefits to the United States and a path initiated by the military presents a realistic route by which their adoption can be achieved.**

#### SMRs are cost-effective, safe, and can be quickly deployed

Szondy 12

David, freelance writer based in Monroe, Washington. An award-winning playwright, he has contributed to Charged and iQ magazine and is the author of the website Tales of Future Past, February 16, "Feature: Small modular nuclear reactors - the future of energy?", [www.gizmag.com/small-modular-nuclear-reactors/20860/](http://www.gizmag.com/small-modular-nuclear-reactors/20860/)

One way of getting around many of these problems is through the development of small modular reactors (SMR). These are reactors capable of generating about 300 megawatts of power or less, which is enough to run 45,000 US homes. Though small, SMRs are proper reactors. They are quite different from the radio-thermal generators (RTG) used in spacecraft and remote lighthouses in Siberia. Nuclear reactors such as SMRs use controlled nuclear fission to generate power while RTGs use natural radioactive decay to power a relatively simple thermoelectric generator that can only produce, at most, about two kilowatts.¶ In terms of power, RTGs are the equivalent of batteries while small nuclear reactors are only "small" when compared to conventional reactors. They are hardly the sort that you would keep in the garage. In reality, SMR power plants would cover the area of a small shopping mall. Still, such an installation is not very large as power plants go and a reactor that only produces 300 megawatts may not seem worth the investment, but the US Department of Energy is offering US$452 million in matching grants to develop SMRs and private investors like the Bill Gates Foundation and the company of Babcock and Wilcox are putting up money for their own modular reactor projects.¶ The 60-year old breakthrough¶ One reason for government and private industry to take an interest in SMRs is that they've been successfully employed for much longer than most people realize. In fact, hundreds have been steaming around the world inside the hulls of nuclear submarines and other warships for sixty years. They've also been used in merchant ships, icebreakers and as research and medical isotope reactors at universities. There was even one installed in the Antarctic at McMurdo Station from 1962 to 1972. Now they're being considered for domestic use.¶ The case for SMRs¶ SMRs have a number of advantages over conventional reactors. For one thing, SMRs are cheaper to construct and run. This makes them very attractive to poorer, energy-starved countries; small, growing communities that don't require a full-scale plant; and remote locations such as mines or desalination plants. Part of the reason for this is simply that the reactors are smaller. Another is that, not needing to be custom designed in each case, the reactors can be standardized and some types built in factories that are able to employ economies of scale. The factory-built aspect is also important because a factory is more efficient than on-site construction by as much as eight to one in terms of building time. Factory construction also allows SMRs to be built, delivered to the site, and then returned to the factory for dismantling at the end of their service lives - eliminating a major problem with old conventional reactors, i.e. how to dispose of them.¶ SMRs also enjoy a good deal of design flexibility. Conventional reactors are usually cooled by water - a great deal of water - which means that the reactors need to be situated near rivers or coastlines. SMRs, on the other hand, can be cooled by air, gas, low-melting point metals or salt. This means that SMRs can be placed in remote, inland areas where it isn't possible to site conventional reactors.¶ Safety¶ This cooling system is often passive. In other words, it relies more on the natural circulation of the cooling medium within the reactor's containment flask than on pumps. This passive cooling is one of the ways that SMRs can improve safety. Because modular reactors are smaller than conventional ones, they contain less fuel. This means that there's less of a mass to be affected if an accident occurs. If one does happen, there's less radioactive material that can be released into the environment and makes it easier to design emergency systems. Since they are smaller and use less fuel, they are easier to cool effectively, which greatly reduces the likelihood of a catastrophic accident or meltdown in the first place.¶ This also means that accidents proceed much slower in modular reactors than in conventional ones. Where the latter need accident responses in a matter of hours or minutes, SMRs can be responded to in hours or days, which reduces the chances of an accident resulting in major damage to the reactor elements.¶ The SMR designs that reject water cooling in favor of gas, metal or salt have their own safety advantages. Unlike water-cooled reactors, these media operate at a lower pressure. One of the hazards of water cooling is that a cracked pipe or a damaged seal can blow radioactive gases out like anti-freeze out of an overheated car radiator. With low-pressure media, there's less force to push gases out and there's less stress placed on the containment vessel. It also eliminates one of the frightening episodes of the Fukushima accident where the water in the vessel broke down into hydrogen and oxygen and then exploded.¶ Another advantage of modular design is that some SMRs are small enough to be installed below ground. That is cheaper, faster to construct and less invasive than building a reinforced concrete containment dome. There is also the point that putting a reactor in the ground makes it less vulnerable to earthquakes. Underground installations make modular reactors easier to secure and install in a much smaller footprint. This makes SMRs particularly attractive to military customers who need to build power plants for bases quickly. Underground installation also enhances security with fewer sophisticated systems needed, which also helps bring down costs.¶ SMRs can help with proliferation, nuclear waste and fuel supply issues because, while some modular reactors are based on conventional pressurized water reactors and burn enhanced uranium, others use less conventional fuels. Some, for example, can generate power from what is now regarded as "waste", burning depleted uranium and plutonium left over from conventional reactors. Depleted uranium is basically U-238 from which the fissible U-235 has been consumed. It's also much more abundant in nature than U-235, which has the potential of providing the world with energy for thousands of years. Other reactor designs don't even use uranium. Instead, they use thorium. This fuel is also incredibly abundant, is easy to process for use as fuel and has the added bonus of being utterly useless for making weapons, so it can provide power even to areas where security concerns have been raised.¶ But there's still the sticking point that modular reactors are, by definition, small. That may be fine for a submarine or the South Pole, but what about places that need more? Is the alternative conventional nuclear plants? It turns out that the answer is no. Modular reactors don't need to be used singly. They can be set up in batteries of five or six or even more, providing as much power as an area needs. And if one unit needs to be taken off line for repairs or even replacement, it needn't interfere with the operation of the others.

#### We have the personnel

ITA 11

(International Trade Administration, “The Commercial Outlook for U.S. Small Modular Nuclear Reactors” Manufacturing and Services Competitiveness Report, February 2011, US Department of Commerce)

A serious obstacle to the resurgence of traditional nuclear power in the United States is the eroded domestic manufacturing capacity for the major nuclear components. A robust program of building SMRs, however, could make use of existing domestic capacity that is already capable of completely constructing most proposed SMR designs. SMRs would not require the ultra-heavy forgings that currently can only be made overseas. U.S. suppliers say that firms could retool using existing capabilities and resources and could source most of the components of SMRs here in the United States. This ability could mean tremendous new commercial opportunities for U.S. firms and workers.¶ A substantial SMR deployment program in the United States could result in the creation of many new jobs in manufacturing, engineering, transportation, construction (for site preparation and installation) and craft labor, professional services, and ongoing plant operations. As SMR manufacturers prove their designs in the domestic market, they will likely consider export opportunities. The modular nature of SMRs and their relative portability means that locating export-oriented SMR manufacturing and assembly could make sense for U.S. companies, as opposed to the localiza-tion that is typically necessary for building larger reactors

#### DOD has the expertise

Cohen 12

Armond Cohen 12, Executive Director of the Clean Air Task Force, “DoD: A Model for Energy Innovation?”, May 29, <http://www.catf.us/blogs/ahead/2012/05/29/dod-a-model-for-energy-innovation/>

Unlike most other agencies, including the Energy Department, the Pentagon is the ultimate customer for the new technology it helps create, spending some $200 billion each year on R&D and procurement. The implications of DoD’s role as customer have not been widely appreciated, as: · DoD, uniquely in government, supports multi-year, billion-dollar “end to end” innovation efforts that produce technology that is continuously tested, deployed and refined on bases and in the field, providing real world feedback that leads to increases in performance and reductions in cost. By contrast, most of the federal government’s civilian energy innovation efforts involve research loosely connected at best with the few commercialization efforts that it supports. · DoD and its contractors know how to bring together multiple innovations to achieve system-level advances leading to big performance gains (examples range from nuclear submarines to unmanned aircraft to large-scale information systems). This systems approach is precisely what is needed to advance clean energy technologies. · Relatively stable, multi-year funding allows the Pentagon to pursue “long cycle” innovation that is necessary for large, capital- intensive technologies and supports a highly capable contractor base that can respond to changing national security demands. · The Pentagon’s scope and budget has allowed it to experiment with new and creative innovation tools such as the well-known Defense Advanced Projects Research Agency, which has produced extraordinary technological breakthroughs; and the Environmental Security Technology Certification Program, which develops and demonstrates cost-effective improvements in environmental and energy technologies for military installations and equipment. · Because of DoD’s size and demands for performance and reliability, it is unique among government and private sector organizations as a demonstration test-bed. Smart-grid technologies and advanced energy management systems for buildings are already poised to benefit from this aspect of the Pentagon’s innovation system. · DoD has collaborated effectively with other federal agencies, including the Department of Energy and its predecessors (for example, to advance nuclear energy technologies). Continuing competition and cooperation between DoD and DOE will spur energy innovation.  DoD’s innovation capabilities can enhance U.S. national security, improve U.S. international competitiveness, and spur global energy restructuring and greenhouse gas emissions reductions. At the same time, while providing enormous opportunities to develop and test energy efficiency technologies and small scale distributed energy appropriate to forward bases, the Pentagon is unlikely to become an all-purpose hub for advancing all categories of clean-energy technologies, because its energy innovation activities will be sustainable only where they can support the nation’s defense capabilities. Therefore, many other large-scale technologies that are of great importance to improving the environment, such as carbon-free central station generation or zero carbon transportation, may not as easily fit with DoD’s mission. Possible exceptions might include small modular nuclear reactors that can be used for producing independent, non-grid power at military bases, or, conceivably, zero-carbon liquid fuels other than anything resembling current generation biofuels.

#### Nuclear power is inevitable

IAEA applications

Middle class

Population growth

Urbanization

Warming

Desal

**Ebinger and Squassoni 11**

Charles K Ebinger and Sharon Squassoni 11, Charles is senior fellow and director of the Energy Security Initiative at the Brookings Institution, Sharon is senior fellow and director of the Proliferation Prevention Program at the Center for Strategic and International Studies, “Industry and Emerging Nuclear Energy Markets” in “Business and Nonproliferation”, googlebooks

As mentioned previously, **a notable feature of the nuclear renaissance is the widespread interest in nuclear power, especially in countries without a commercial nuclear infrastructure. According to the** International Atomic Energy Agency (**IAEA**), at least **sixty-five countries have expressed** such **interest**, most from outside the industrialized economies of the Organization of Economic Cooperation and Development (OECD), the main locus of nuclear power capacity at present. **Most of the capacity growth up to 2030 is expected to occur in the Middle East, South Asia, Southeast Asia, and the Far East**. As part of this growth, **eleven developing countries are serious candidates for first reactors**, although progress in carrying out their plans varies widely (see table 4-1). **These countries are drawing new suppliers into the nuclear market** (notably China, India, and South Korea) **and sparking activity among existing suppliers** such as Russia and Japan. Overall, however, many countries will not be able to follow through on growth plans owing to cost, limited grid capacity, and perhaps public resistance. **Countries are moving toward nuclear energy**, not the mention other sources of primary fuel, in large part **because of mounting demand: between 2008 and 2035 global electricity consumption is expected to increase 80 percent, and 80 percent of that growth will take place in non-OECD countries**. **Underlying this large increase in electricity demand are population growth, urbanization, concerns about CO2 emissions from fossil fuel combustion, energy security, and pressure from a growing middle class for goods and services using or produced by electricity**. **Over this period, global population will rise from 6.7 billion to 8.5 billion, with 7.2 billion of the total living in non-OECD countries**. **Most of this increase will take place in China, India, and the Middle East**, with the balance in the rest of the developing world, while the share of the global population in the OECD and Russia will decline. Today nearly 1.4 billion people have no electricity, a figure that may well increase with further population growth, despite movement into the modern energy economy. **Urbanization will undoubtedly push demand up as well**. For the first time in history, a majority of the world’s population is living in urban areas, a trend likely to continue, especially in developing countries. **With the movement of hundreds of millions of people from rural areas to cities, more communities will turn from traditional** and often free **fuels** (wood, forest residues, agricultural wastes, bagasse, and dung) **to modern fuels such as electricity, natural gas, and petroleum products**. **The dramatic growth of the middle class in a number of emerging market nations is also having a large impact on energy consumption. The World Bank predicts that by 2030 the middle class in these nations will jump to 1.2 billion from 430 million in 2000**. It is estimated that in India alone, a country that before Fukushima was developing plans for nuclear power, the number of households with an annual disposal income of $5,000-$15,000 will increase from 36 percent of the population in 2010 to more than 58 percent by 2020. **Climate change**, too, **will have some of its largest impact in developing countries**, which, according to the International Energy Agency (IEA), will be responsible for nearly all of the projected global increase in CO2 emissions by 2035. In large part, the cause of this rise is coal-fired power in China and India. **The urgency of finding alternatives to coal is recognized by** others as well, including **Indonesia, Pakistan, Poland, South Africa, and Russia**. Compared with developed countries, developing nations rely far more on imported fossil fuels, especially oil, to generate power. When the price of oil on the world market rose to $147 a barrel in 2008, it became clear that dependence on imported fossil fuels for electricity generation can destroy a nation’s economy and that fuel diversification is vital for energy security. As prices climbed beyond $100 a barrel, Jordan, a country committed to introducing civilian nuclear energy, was particularly hard hit: 99 percent of its electricity is generated from either oil or gas, 96 percent of which is imported. **Developing countries also see nuclear energy as a possible source of power for desalination plants, especially in the** Gulf Cooperation Council (**GCC**) **countries and elsewhere in the Middle East**. **As the demand for freshwater supplies increases** – along with the emphasis on limited the use of fossil fuels to generates electricity because of the impact of emissions, price volatility, and supply disruptions – **the nuclear option will be considered even more viable**. Moreover, some **countries with large resources of oil or gas**, **such as the** United Arab Emirates (**UAE**) **and Saudi Arabia**, **are hoping nuclear power will help reduce their domestic use of these fuels in generating power and will boost the financial benefits of exporting them**. **For some developing countries, status and geopolitics are undoubtedly important factors in considering the development or expansion of a civilian nuclear energy program**. **In the view of Turkey’s energy minister** Hilmi Guler, for instance, **nuclear technology is a requirement for a seat at the table with the ten most developed countries in the world**.

#### Incentives now, but they are insufficient

DoD Energy Blog 11

DoD Energy Blog, 2/16/11, Good Things in Small Packages:Small Reactors for Military Power Good Things in Small Packages:Small Reactors for Military Power, dodenergy.blogspot.com/2011/02/good-things-in-small-packagessmall.html

They conclude that DOD should lead the charge for small reactors to meet their own needs as well as to make sure that the US leads that industry’s development. When first written the paper mentioned that most of the technology was stymied somewhere between the drawing board and production. But there is good news in the President’s 2011 Budget for nukes. The New York Times reported that the budget contains $500 million over five years for DOE to complete two designs and secure National Regulatory Commission (NRC) approval. The reactors will be built entirely in a factory and trucked to the site, like “modular homes”. Sounds just like what Dr. Andres ordered. Only problem is that $500 million is only about half of the cost to get to NRC approval**.** Actual production is in the $2 billion neighborhood, and that is a pricey neighborhood. Enter Amory Lovins. Amory has often derided the cost for nuclear power as an unnecessary expenditure. His argument is that micropower is the way of the future, not big honking gigawatt nuclear power plants. Although there has been a resurgence in the interest in nuclear power, it is still difficult to find private investments willing to underwrite the expense. Maybe the development of small nukes for national security reasons will lead to cost effective small nukes for distributed micropower nationwide. Small reactors for FOBs are more problematic. Even Bagram only needs about 25 MW with other FOBS being smaller. Security will be the first concern. If someone tries a smash and grab at Fort Hood they have to go through a couple of armored divisions and have a long way to got to get away. Kabul to Peshawar is only 128 miles. Cost shouldn’t be an overriding factor in considering secure power, but even at a 75% cost reduction in production, half a billion for 25MW is a bit much. Of course if you could produce a 300MW system, Bagram could air condition Kabul! The real soft power. My buddy, T.C. the fighter pilot, would tell you that DOD's mission is to fight and win the Nation's wars, not spark business recovery. DOD needs to focus on conserving energy. “Reducing the consumption at Miramar by 50% might save a lot of fuel and money, but I'd rather reduce consumption by 50% at PB Jugroom even though the savings in gallons and dollars are tiny.” Reducing demand reduces risk. All that being said, it may well be worth DOE and DOD efforts to explore the potential. It is something that may be beyond the means of commercial entities, but not government (See China). If there is going to be a market here, let us not be left behind as we have been with other alternative energy production means.

#### Natural gas isn’t a solvency take out

Lamonica 12

Martin Lamonica is a senior writer covering green tech and cutting-edge technologies [August 9, 2012, “A Glut of Natural Gas Leaves Nuclear Power Stalled,” http://www.technologyreview.com/news/428737/a-glut-of-natural-gas-leaves-nuclear-power/]

Outside the United States, it's a different story. Unconventional sources of natural gas also threaten the expansion of nuclear, although the potential impact is less clear-cut. Around the world, there are 70 plants now under construction, but shale gas also looms as a key factor in planning for the future. Prices for natural gas are already higher in Asia and Europe, and shale gas resources are not as fully developed as they are the United States.¶ Some countries are also blocking the development of new natural gas resources. France, for instance, which has a strong commitment to nuclear, has banned fracking in shale gas exploration because of concerns over the environmental impact.¶ Fast-growing China, meanwhile, needs all the energy sources available and is building nuclear power plants as fast as possible.¶ Even in United States, of course, super cheap natural gas will not last forever. With supply exceeding demand, some drillers are said to be losing money on natural gas, which could push prices back up. Prices will also be pushed upward by utilities, as they come to rely on more natural gas for power generation, says James.¶ Ali Azad, the chief business development officer at energy company Babcock & Wilcox, thinks the answer is making nuclear power smaller, cheaper, and faster. His is one of a handful of companies developing small modular reactors that can be built in three years, rather than 10 or more, for a fraction of the cost of gigawatt-size reactors. Although this technology is not yet commercially proven, the company has a customer in the Tennessee Valley Authority, which expects to have its first unit online in 2021 (see "A Preassembled Nuclear Reactor").¶ "When we arrive, we will have a level cost of energy on the grid, which competes favorably with a brand-new combined-cycle natural gas plants when gas prices are between $6 to $8," said Azad. He sees strong demand in power-hungry China and places such as Saudia Arabia, where power is needed for desalination.¶ Even if natural gas remains cheaper, utilities don't want to find themselves with an overreliance on gas, which has been volatile on price in the past, so nuclear power will still contribute to the energy mix. "[Utilities] still continue [with nuclear] but with a lower level of enthusiasm—it's a hedging strategy," says Hans-Holger Rogner from the Planning and Economics Studies section of the International Atomic Energy Agency. "They don't want to pull all their eggs in one basket because of the new kid on the block called shale gas."¶

## 2AC

**China Adv**

**The signal of the plan will solve**

**Stepp 2011**

(Matthew Stepp, March 9, 2011, “The Nuclear Energy Game Changer Thoughts After the NRC Regulatory Information Conference,” Innovation Files, <http://www.innovationfiles.org/the-nuclear-energy-game-changer-thoughts-after-the-nrc-regulatory-information-conference/>)

So, while “silver bullet” may be too strong of a statement – SMRs don’t solve all our clean energy needs – the potential benefits of SMRs are significant and the key to realizing these benefits comes down to creating a cohesive national clean energy policy to innovate through a number of technological barriers. And I’m not the only one who thinks so. This week was the 23rd Annual **N**uclear **R**egulatory **C**ommission Information Conference that brought together hundreds of nuclear energy leaders from industry and government to talk all things nuclear. The hottest topic? SMRs. The clear message? Industry and government leaders are ready to move forward in developing new **sm**all **r**eactor**s** **as soon as policy makers give the green light**. In his opening conference speech, NRC Chairman Gregory Jaczko remarked that his agency will be taking the first steps in licensing new SMRs by announcing that, “[the NRC] may take final action on three design certification rules for new [LWR-SMR] reactors as early as this summer, and conduct the first mandatory hearing on a new reactor license since the 1970s.” Department of Energy’s Director for Advanced Reactor Design Sal Golub presented that the goal of his office is to “license and deploy LWR-SMRs by 2020.” The President proposed in both his 2011 and 2012 budgets to create a nearly $100 million SMR program within the DOE Office of Nuclear Energy that would focus on deploying LWR-SMRs as well as perform much needed advanced SMR RD&D. And bipartisan group of Senators have recently proposed a bill designed to speed up the deployment of SMRs.

### Expertise Adv

**Al Qaeda poses a high risk of nuclear terrorism.**

**Kanani 11**

(Editor of World Affairs Commentary, Rahim, “New al-Qaeda Chief Zawahiri Has Strong Nuclear Intent” Forbes, <http://www.forbes.com/sites/rahimkanani/2011/06/29/new-al-qaeda-chief-zawahiri-has-strong-nuclear-intent/>)

Rigid, arrogant, unpopular and lacking the necessary charisma to reenergize a battered global terrorist organization, Dr. Ayman al-Zawahri has been continually regarded by U.S. officials and veteran terrorism analysts as incapable of following in the footsteps of Osama bin Laden. Perhaps, but underestimating his ability to orchestrate widespread terror is a dangerous consequence of marginalizing his learned skillset, for we must not discount his former position as al-Qaeda’s deputy chief and operational commander for years. **We should be especially worried about the threat of nuclear terrorism under Zawahiri’s leadership**. In a recent report titled “Islam and the Bomb: Religious Justification For and Against Nuclear Weapons”, which I researched for and contributed to, lead author Rolf Mowatt-Larssen, **former director of intelligence** and counterintelligence **at** the U.S. **Department of Energy, argues** that al-Qaeda’s WMD ambitions are stronger than ever. And that “this intent no longer feels theoretical, but operational.” “I believe **al-Qaeda is laying the groundwork for a large scale attack on the United States**, possibly in the **next year** or two,” continues Mowatt-Larssen in the opening of the report issued earlier this year by the Belfer Center for Science and International Affairs at Harvard Kennedy School. “The attack may or may not involve the use of WMD, but there are signs that al-Qaeda is working on an event on a larger scale than the 9/11 attack.” Most will readily dismiss such claims as implausible and unlikely, and we hope they are right, but after spending months with Mowatt-Larssen, who also served as the former head of the Central Intelligence Agency’s WMD and terrorism efforts, scrutinizing and cross-referencing Zawahiri’s 268-page treatise published in 2008 titled “Exoneration”, the analytics steered us towards something far more remarkable than expected. “As I read the text closely, in the broader context of al-Qaeda’s past, my concerns grew that **Zawahiri has written this treatise** to play a part in the ritualistic process of **preparing for an impending attack,**” states Mowatt-Larssen. “As Osama **bin Laden’s fatwa in 1998 foreshadowed the 9/11 attack,** Ayman **Zawahiri’s fatwa in 2008** may have **started the clock** ticking **for al-Qaeda’s next** large scale **strike on America**. If the pattern of al-Qaeda’s modus operandi holds true, we are in the middle of an attack cycle.” Among several important findings, **Zawahiri** sophisticatedly **weaves** identical passages, sources and religious **justifications for a nuclear terrorist attack against the United States** previously penned by radical Saudi cleric Nasir al Fahd. Indeed, the language used, research cited, and arguments put forth are nothing short of detailed and deliberate. Reading as both a religious duty to kill millions of Americans and a lengthy suicide note together, this piece of literature is something we must take seriously with Zawahiri now at the helm of al-Qaeda. **The time may have come for al-Qaeda’s new CEO to leave a legacy of his own.** Concluding the author’s note, Mowatt-Larssen states, “Even if this theory proves to be wrong, **it is better to overestimate the enemy** than to under­estimate him. **Conventional wisdom holds that al-Qaeda is** spent—that they are **incapable of carrying out another 9/11**. Leaving aside whether this view is correct, for which I harbor grave doubts, **we will** surely **miss the signs of the next attack if we continue to overestimate our own successes, and dismiss what terrorists remain capable of accomplishing** when they put their minds to it.”

**Other sects will emerge**

**Benjamin 9**

David Benjamin, (Sr. Fellow, Center for Strategic and International Studies), TERRORISM, 2009, 24.

While it is true that bin Laden's group has been seriously hurt by the capture of many of its leaders and the disruption of many of its cells, the administration's focus on numbers feeds the widespread belief that the terrorist enemy is finite in quantity and destructible in the near term. The failure to look beyond al Qaeda and to recognize the multiplying forms that the jihadist threat is taking represents a serious failure of vision. We are repeating the errors of the time before 9/11 in believing, first, that what terrorists do abroad has little consequence for national security, and, second, that only states can truly threaten us. Unwittingly, we are clearing the way for the next attack--and those that will come after.

**Al Qaeda is winning ideologies**

**Clark 9**

Howard Clark, (Former Intelligence Officer, U.S. Marine Corps), HOW YOU CAN KILL AL QAEDA, 2009, 23.

Al-Qaeda is winning the war of ideas. Facts and pictures illustrate al-Qaeda's narrative of Islam under attack from the West. Images of Guantanamo and Abu Ghraib display the United States humiliating Muslims and help to provide al-Qaeda with new recruitment pools and public support.

### Procurement T

#### 1. We meet- plan creates incentives and secures a market for nuclear energy

#### 2. We meet- paying them is the financial incentive

#### 3. We meet- decrease costs through econs of scale- that’s andres and breetz and andres and loudermilk from solvency

#### 4. Counter interpretation- financial incentives are disbursement of public funds or contingent commitments

Webb 93

(lecturer in the Faculty of Law at the University of Ottawa (Kernaghan, “Thumbs, Fingers, and Pushing on String: Legal Accountability in the Use of Federal Financial Incentives”, 31 Alta. L. Rev. 501 (1993) Hein Online)

In this paper, "financial incentives" are taken to mean disbursements 18 of public funds or contingent commitments to individuals and organizations, intended to encourage, support or induce certain behaviours in accordance with express public policy objectives. They take the form of grants, contributions, repayable contributions, loans, loan guarantees and insurance, subsidies, procurement contracts and tax expenditures.19 Needless to say, the ability of government to achieve desired behaviour may vary with the type of incentive in use: up-front disbursements of funds (such as with contributions and procurement contracts) may put government in a better position to dictate the terms upon which assistance is provided than contingent disbursements such as loan guarantees and insurance. In some cases, the incentive aspects of the funding come from the conditions attached to use of the monies.20 In others, the mere existence of a program providing financial assistance for a particular activity (eg. low interest loans for a nuclear power plant, or a pulp mill) may be taken as government approval of that activity, and in that sense, an incentive to encourage that type of activity has been created.21 Given the wide variety of incentive types, it will not be possible in a paper of this length to provide anything more than a cursory discussion of some of the main incentives used.22 And, needless to say, the comments made herein concerning accountability apply to differing degrees depending upon the type of incentive under consideration.¶ By limiting the definition of financial incentives to initiatives where *public funds are either disbursed or contingently committed*, a large number of regulatory programs with incentive *effects* which exist, but in which no money is forthcoming,23 are excluded from direct examination in this paper. Such programs might be referred to as *indirect* incentives. Through elimination of indirect incentives from the scope of discussion, thedefinition of the incentive instrument becomes both more manageable and more particular. Nevertheless, it is possible that much of the approach taken here may be usefully applied to these types of indirect incentives as well.24 Also excluded from discussion here are social assistance programs such as welfare and *ad hoc* industry bailout initiatives because such programs are not designed primarily to *encourage* behaviours in furtherance of specific public policy objectives. In effect, these programs are assistance, but they are not incentives.

#### Ground- it is grounded in the literature and is the only way to intrinsically keep military affs in the topic which are key to beat states counterplans, and it links much harder to disads

#### Predictability- our evidence has a definitive list and an intent to define, and is supported in the literature

#### Limits- only adds procurement affs to their list, but limits out all indirect incentive effects their allows

#### Education- key to talk about different actors use of energy and how energy’s connection to the military, and no aff makes sense where the government is the consumer

#### Reasonability key to prevent a race to the most limiting definition

### Near Bases CP

Perm- do the plan and the CP

#### Perm- The United States Department of Defense should procure small modular reactors for use on military bases in the United States where siting would not negatively impact training.

#### Their evidence just says its hard, not impossible- net benefit isn’t reverse causal.

Perm do the CP- DoD not just going to stick reactor in the middle of a base- normal means is picking a decent location

**King et al 11**

Marcus King et al 11, Associate Director of Research, Associate Research Professor of International Affairs, Elliot School of International Affairs, The George Washington University, et al., March 2011, “Feasibility of Nuclear Power on U.S. Military Installations,” <http://www.cna.org/sites/default/files/research/Nuclear%20Power%20on%20Military%20Installations%20D0023932%20A5.pdf>

**A reactor owner/operator, typically a utility, will select a site** and may apply for an early site permit from the NRC. They select a reactor design, (certified under a separate process), to construct on the site and then apply for a combined operating license. **Construction begins after approval**.¶ **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 considered** and that ways are planned to mitigate those impacts.

Non unique- ev says training funding just cut- means its screwed now

#### Readiness doomed – multiple reasons.

Burns ‘6

(Robert, AP Military Writer, January 24, Associated Press, “Study: Army Stretched to Breaking Point,” <http://news.yahoo.com/s/ap/20060124/ap_on_go_ca_st_pe/army_breaking_point;_ylt=AkDwbD7AfATSH1tnoIHL_xSs0NUE;_ylu=X3oDMTA3ODdxdHBhBHNlYwM5NjQ->)

Stretched by frequent troop rotations to Iraq and Afghanistan, the Army has become a “thin green line” that could snap unless relief comes soon, according to a study for the Pentagon. Andrew Krepinevich, a retired Army officer who wrote the report under a Pentagon contract, concluded that the Army cannot sustain the pace of troop deployments to Iraq long enough to break the back of the insurgency. He also suggested that the Pentagon’s decision, announced in December, to begin reducing the force in Iraq this year was driven in part by a realization that the Army was overextended. As evidence, Krepinevich points to the Army’s 2005 recruiting slump — missing its recruiting goal for the first time since 1999 — and its decision to offer much bigger enlistment bonuses and other incentives. “You really begin to wonder just how much stress and strain there is on the Army, how much longer it can continue,” he said in an interview. He added that the Army is still a highly effective fighting force and is implementing a plan that will expand the number of combat brigades available for rotations to Iraq and Afghanistan. The 136-page report represents a more sobering picture of the Army’s condition than military officials offer in public. While not released publicly, a copy of the report was provided in response to an Associated Press inquiry. Illustrating his level of concern about strain on the Army, Krepinevich titled one of his report’s chapters, “The Thin Green Line.” He wrote that the Army is “in a race against time” to adjust to the demands of war “or risk `breaking’ the force in the form of a catastrophic decline” in recruitment and re-enlistment. Col. Lewis Boone, spokesman for Army Forces Command, which is responsible for providing troops to war commanders, said it would be “a very extreme characterization” to call the Army broken. He said his organization has been able to fulfill every request for troops that it has received from field commanders. The Krepinevich assessment is the latest in the debate over whether the wars in Iraq and Afghanistan have worn out the Army, how the strains can be eased and whether the U.S. military is too burdened to defeat other threats. Rep. John Murtha (news, bio, voting record), the Pennsylvania Democrat and Vietnam veteran, created a political storm last fall when he called for an early exit from Iraq, arguing that the Army was “broken, worn out” and fueling the insurgency by its mere presence. Administration officials have hotly contested that view. George Joulwan, a retired four-star Army general and former NATO commander, agrees the Army is stretched thin. “Whether they’re broken or not, I think I would say if we don’t change the way we’re doing business, they’re in danger of being fractured and broken, and I would agree with that,” Joulwan told CNN last month. Krepinevich did not conclude that U.S. forces should quit Iraq now, but said it may be possible to reduce troop levels below 100,000 by the end of the year. There now are about 136,000, Pentagon officials said Tuesday. For an Army of about 500,000 soldiers — not counting the thousands of National Guard and Reserve soldiers now on active duty — the commitment of 100,000 or so to Iraq might not seem an excessive burden. But because the war has lasted longer than expected, the Army has had to regularly rotate fresh units in while maintaining its normal training efforts and reorganizing the force from top to bottom. Krepinevich’s analysis, while consistent with the conclusions of some outside the Bush administration, is in stark contrast with the public statements of Defense Secretary Donald H. Rumsfeld and senior Army officials. Army Secretary Francis Harvey, for example, opened a Pentagon news conference last week by denying the Army was in trouble. “Today’s Army is the most capable, best-trained, best-equipped and most experienced force our nation has fielded in well over a decade,” he said, adding that recruiting has picked up. Rumsfeld has argued that the experience of fighting in Iraq and Afghanistan has made the Army stronger, not weaker. “The Army is probably as strong and capable as it ever has been in the history of this country,” he said in an appearance at the Paul H. Nitze School of Advanced International Studies in Washington on Dec. 5. “They are more experienced, more capable, better equipped than ever before.” Krepinevich said in the interview that he understands why Pentagon officials do not state publicly that they are being forced to reduce troop levels in Iraq because of stress on the Army. “That gives too much encouragement to the enemy,” he said, even if a number of signs, such as a recruiting slump, point in that direction. Krepinevich is executive director of the Center for Strategic and Budgetary Assessments, a nonprofit policy research institute. He said he concluded that even Army leaders are not sure how much longer they can keep up the unusually high pace of combat tours in Iraq before they trigger an institutional crisis. Some major Army divisions are serving their second yearlong tours in Iraq, and some smaller units have served three times.

#### Hard power too high now.

Friedman and Preble 10

(Benjamin Friedman is a research fellow in defense and homeland security studies at the Cato Institute, Christopher Preble is director of foreign policy studies at the Cato Institute, Budgetary Savings from Military Restraint, September 22, 2010 Cato Policy Analysis No. 667 September 23, 2010 <http://www.cato.org/pubs/pas/PA667.pdf>)

As for our potential great power rivals— Russia and China—we would have no good reason to fight a war with either in the foreseeable future if we did not guarantee the security of their neighbors. Both lag far behind us in military capability. That would remain the case even with the reductions proposed here.6 As it stands today, the United States spends about five times more on defense than those states collectively. We account for nearly 50 percent of all military spending; our allies and potential strategic partners contribute much of the rest. (See Figure 2.)

### Fiscal Cliff

#### Immigration reform is at the top of the agenda

Raji 11/7

Manu Raji (writer for Politico) November 7, 2012 “Harry Reid agenda: Filibuster crackdown, tax increases” http://www.politico.com/news/stories/1112/83514.html

Once the procedural snafus are resolved, Reid said “very high” on his priority list will be an attempt to pass an immigration overhaul, an issue important to the Latino community that powered Tuesday night’s Democratic wins. But it would certainly start a divisive and emotional debate certain to alienate conservative members of both parties. Reid said he could get 90 percent of his caucus to support such a measure. Republicans, he said, would block immigration reform “at their peril.” “Not for political reasons; because it’s the wrong thing to do to not have comprehensive immigration reform,” Reid said. “The system’s broken and needs to be fixed.”

#### Wind energy tax credit will create a fight now

Schorsch 11/8

 Peter Schorsch (Executive Editor of SaintPetersblog and President of Extensive Enterprises Online, LLC) November 8, 2012 “Lawmakers face a busy lame duck session” http://saintpetersblog.com/2012/11/lawmakers-face-a-busy-lame-duck-session/

Wind energy tax credits: “After simmering for the better part of this year, the battle over the wind-energy production tax credit will reach a fevered pitch during the lame-duck session. But supporters and detractors of the policy, which will expire at year’s end unless both chambers vote to renew it, acknowledge that the tax credit’s fate hinges less on its own particular merit and more on how successful lawmakers are at striking a deal to extend a wide range of tax extenders.”

#### No fiscal cliff compromise – both sides hardening positions

Kelley Beaucar Vlahos (writer for Fox News) November 7, 2012 “

Gridlock as usual or new era of compromise? Washington stares down 'fiscal cliff' crisis after election” http://www.foxnews.com/politics/2012/11/07/gridlock-as-usual-or-new-era-compromise-washington-faces-choice-after-election/

Obama and the Democrats have shown interest in letting the so-called Bush tax rates expire for the top earners, while Republicans have not shown an inclination yet for budging on it. Time will tell if there is room for negotiation -- a combination of increased revenue and cuts -- though Obama may hold the upper hand. Still, the ideological lines are firm and with the addition of two fiscal conservatives to the Republican ranks in the Senate -- Ted Cruz from Texas, and Jeff Flake in Arizona -- there might be more of a hardening than Hill watchers think, said David Boaz, senior politics analyst from the Cato Institute. "My gut level instinct would be there are fundamental differences between the Democrats and the Republicans in Congress and the election hasn't moved us any closer to resolving these questions," he said.

#### No compromise – they will delay it

Michael Neibauer (writer for the Washington Business Journal) November 7, 2012 “Congress likely to try to defer sequestration” http://www.bizjournals.com/washington/blog/fedbiz\_daily/2012/11/congress-likely-try-to-defer.html?page=all

Rather than attempt to squeeze a compromise out of a lame-duck session, Congress will likely pursue one of several options to delay the sequestration budget cuts until 2013 or beyond, according to a report released Wednesday. The 124-page post-election analysis from Patton Boggs LLP concludes that Congress would rather delay sequestration than face further reductions to the U.S. debt rating, like what happened following the failed 2011 debt ceiling negotiations. "Several Republican and Democratic lawmakers have floated short-term proposals in which a $20 billion to $75 billion deficit reduction 'down payment' is used to delay the process for three to six months, or even a year," Patton Boggs reports. "Another possibility is that the $984 billion in spending cuts is postponed and subsequently implemented into a shorter window, i.e., over eight fiscal years instead of nine." Sequestration, to be implemented Jan. 2 unless a deal is reached earlier, will force $1.2 trillion in spending reductions over 10 years — $110 billion in the first year. The plan could cost Virginia, D.C. and Maryland more than 400,000 jobs, as federal agency's ratchet down their spending to meet the new mandates. The Bush tax cuts, meanwhile, are scheduled to expire Dec. 31. Combined, sequestration and the tax changes represent the so-called "fiscal cliff." The firm's report seems optimistic that, at the very least, the election will spur some urgency among all parties to come to the negotiating table. According to the report, it is "certain" that the "parties will undertake a serious discussion about tax policy" in the coming months." "Given major philosophical differences on tax policy issues between the parties, it remains to be seen whether these discussions will lead to an agreement to avert the fiscal cliff while, at the same time, clearing the way for comprehensive tax reform," the report states. "In our view, it is likely both will occur in the lame duck session (or shortly thereafter), beginning with agreement on a Bush tax cut extension coupled with a broad framework for a tax reform agreement, with the hard work of tax reform to span across 2013."

**No PC**

**Chicago Tribune 11-1**

“Economic Uncertainty to Linger: Even After Election,”

While action isn't required until the end of December, analysts anticipate that the afterglow of the presidential election will quickly dissipate during the next two months as investors grow anxious about the December deadline and the potential outcome for the economy.¶ "Continued gridlock is a risk," Chadha said. On the other hand, "bipartisan compromise with orderly negotiations would see equities rally."¶ But current political **polls indicate** that **neither candidate will win with a mandate**. So analysts are not anticipating orderly negotiation on tax and spending cuts this year or next.¶ "**A close race or disputed result could reduce the political capital of the winner, diminishing prospects for a compromise solution for the fiscal cliff in the lame-duck session of Congress**," said Citigroup global political analyst Tina Fordham.¶

#### Plan popular in Congress - only 1 vote against it and both parties cosponsor

Pendidikan ‘11

Cinta writes for the Love and Like Education Blog, “Sanders is the Sole Vote Against Small Modular Reactor Research,” <http://loveandlikeeducation.blogspot.com/2011/08/bernie-sanders-and-small-modular.html>

**Sanders is Sole Vote Against Small Modular Reactor Research**¶ Bernie Sanders and Small Modular Reactors¶ Senator Bernie Sanders often speaks about his opposition to Vermont Yankee as having something to do with the age of the plant, the fact it is owned by Entergy, or his "state's rights" stance about regulating nuclear power plants.¶ Recently, however, Sanders made it clear that he is against nuclear power in any form and is proud of that opinion. On Senator Sanders website, he featured the fact that he was the only vote against "a pair of measures that would promote the development of small modular reactors."¶ One of these measures was the Nuclear Power Act S512. **This act would authorize the Secretary of Energy to start a cost-shared program for development o**f small modular reactors **(SMRs).¶ This act had strong bi-partisan support, being sponsored by 3 Republican and 4 Democratic Senators. The act requires research and development funds for SMRs.** The Act is still in process, and does not have a firm dollar amount attached, but the dollar amount is likely to be small (in government terms, at least.). **Current estimates are $100 million per fiscal year** for four years, starting next year.¶ The act also requires that industry cost-share the expense. If industry doesn't think it is worth spending money on the research, the research will not receive government funding either.¶ As a background to the probable cost of this Act, we should note that President Obama requested $4.8 billion dollars for Department of Energy research, of which $3.2 billion is allocated for renewable energy and energy efficiency research. (This number has changed with the debt deal, but new numbers are not available at this time.)¶ Small Modular Reactors for The Future¶ Sander's opposition to this Nuclear Power Act will hurt America's chances to develop an important new exportable technology. Outside of Europe, the nuclear renaissance remains in full swing, with reactors being ordered and built in Arabia, China, India and Southeast Asia. Developing a strong set of SMR designs would be America's best chance to re-entering the world market for nuclear power.¶ SMRs are modular (assembled in a factory and delivered to the site), small (50 to 225 MW) and have many safety features, such as passive cooling. SMRs are expected to have a huge international market. They suitable for many places that do not have the population density or money for the current crop of huge reactors (1200 MW, built on site at great expense). SMRs would make nuclear power affordable and salable many places.¶ Westinghouse and Babcock & Wilcox have invested significant amounts of their own money in developing these products. The NRC is also active in assessing preliminary designs. At another Senate committee meeting on SMRs, Commissioner Magwood of the NRC said that he does not expect decisions made by the NRC to be the critical factor in the success or failure of SMRs. Magwood noted that SMRs have passive safety features and large water inventories; these would be considered during license review.¶ America Fallen Behind¶ America has fallen far behind the rest of the world in most nuclear technologies. Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs) were developed in this country. They are being sold all over the world, but not by United States companies. We're out of the running. Other countries licensed and improved our original technologies. Companies from France, Korea, Russia and China compete to build large reactors in China, Arabia, and Southeast Asia.¶ Three American companies have put millions of dollars into the development of SMRs: Westinghouse, Babcock & Wilcox, and NuScale (a small start-up). Many people in the nuclear industry feel that the race to develop the first successful SMR is a truly high-stakes race, being fought at the level of nationwide efforts. Luckily, SMR development has bi-partisan support, and Mr. Sanders was alone in his opposition to supporting American industry efforts to develop these plants.¶ Should Government Be Involved?¶ Of course, one can make a case that the government should get out of the energy research business altogether. If Senator Sanders wished to save tax dollars by cutting all energy-research programs, he might have a valid case. However, if the government does plan to spend money on energy research, cost-sharing with industry on a new nuclear technology is certainly a far better use of funds than many of the projects in the swollen DOE renewable budget.

**Bipart support for SMR’s in Congress**

**E&E News 9-24**

“DOE Funding for Small Reactors Languishes as Parties Clash on Debt,” <http://www.eenews.net/public/Greenwire/2012/09/24/3>

Some of the nation's largest nuclear power companies are anxious to hear whether they will get a share of a $452 million pot from the Department of Energy for a new breed of reactors that the industry has labeled as a way to lessen the safety risks and construction costs of new nuclear power plants.¶ The grant program for these "small modular reactors," which was announced in January, would mark the official start of a major U.S. foray into the technology even as rising construction costs -- especially when compared to natural-gas-burning plants -- cause many power companies to shy away from nuclear plants.¶ DOE received four bids before the May 21 deadline from veteran reactor designers Westinghouse Electric Co. and Babcock & Wilcox Co., as well as relative newcomers Holtec International Inc. and NuScale Power LLC. Now the summer has ended with no announcement from DOE, even though the agency said it would name the winners two months ago.¶ As the self-imposed deadline passed, companies started hearing murmurs that a decision could come in September, or perhaps at the end of the year. To observers within the industry, it seems that election-year calculations may have sidelined the contest.¶ "The rumors are a'flying," said Paul Genoa, director of policy development at the Nuclear Energy Institute, in an interview last week. "All we can imagine is that this is now caught up in politics, and the campaign has to decide whether these things are good for them to announce, and how**."¶ Small modular reactors do not seem to be lacking in political support. The nuclear lobby** has historically **courted both Democrats and Republicans and** still **sees itself as being in a strong position with key appropriators on both sides of the aisle**.¶ Likewise, **top energy officials in the Obama administration have hailed the promise of the new reactors, and they haven't shown any signs of a change of heart.** DOE spokeswoman Jen Stutsman said last week that the department is still reviewing applications, but she did not say when a decision will be made.¶ "This is an important multiyear research and development effort, and we want to make sure we take the time during the review process to get the decision right," she wrote in an email.¶ That the grants haven't been given out during a taut campaign season, even as President Obama announces agency actions ranging from trade cases to creating new national monuments to make the case for his re-election, may be a sign that the reactors are ensnared in a broader feud over energy spending.¶ Grant recipients would develop reactor designs with an eye toward eventually turning those into pilot projects -- and the loan guarantees that these first-of-a-kind nuclear plants are using today to get financing would be blocked under the "No More Solyndras" bill that passed the House last week (Greenwire, Sept. 14).

**Winners win – passing foreign policy is key.**

**Marshall & Prins 11** Poli Sci Profs, (September 2011, Bryan W. Marshall --- associate professor of political science at Miami University, Brandon C. Prins --- associate professor of political science at the University of Tennessee, Knoxville, Presidential Studies Quarterly, “Power or Posturing? Policy Availability and Congressional Influence on U.S. Presidential Decisions to Use Force”)

Presidents rely heavily on Congress in converting their political capital into real policy success. Policy success not only shapes the reelection prospects of presidents, but it also builds the president’s reputation for political effectiveness and fuels the prospect for subsequent gains in political capital (Light 1982). Moreover, the president’s legislative success in foreign policy is correlated with success on the domestic front. On this point, some have largely disavowed the two-presidencies distinction while others have even argued that foreign policy has become a mere extension of domestic policy (Fleisher et al. 2000; Oldfield and Wildavsky 1989) Presidents implicitly understand that there exists a linkage between their actions in one policy area and their ability to affect another. The use of force is no exception; in promoting and protecting U.S. interests abroad, presidential decisions are made with an eye toward managing political capital at home (Fordham 2002).

**Political capital theory false—can’t influence agenda**

**Dickinson 9**

(Matthew, professor of political science at Middlebury College, May 26, "Sotomayor, Obama and Presidential Power, "http://blogs.middlebury.edu/presidentialpower/2009/05/26/sotamayor-obama-and-presidential-power/)

What is of more interest to me, however, is what her selection reveals about the basis of presidential power.  **Political scientists**, like baseball writers evaluating hitters, **have devised numerous means of measuring a president’s influence in Congress**.  I will devote a separate post to discussing these, but in brief, they often center on the creation of legislative “box scores” designed to measure how many times a president’s preferred piece of legislation, or nominee to the executive branch or the courts, is approved by Congress.  That is, how many pieces of legislation that the president supports actually pass Congress? How often do members of Congress vote with the president’s preferences?  How often is a president’s policy position supported by roll call outcomes?  **These measures**, however, **are a misleading gauge of presidential power – they are a better indicator of congressional power.**  This is because **how members of Congress vote on a nominee or legislative item is rarely influenced by anything a president does**.  Although journalists (and political scientists) often focus on the legislative “endgame” to gauge presidential influence – will the President swing enough votes to get his preferred legislation enacted? – **this mistakes an outcome with actual evidence of presidential influence.  Once we control for other factors – a member of Congress’ ideological and partisan leanings, the political leanings of** her **constituency,** whether she’s up for **reelection** or not – **we can usually predict how she will vote without needing to know much of anything about what the president wants.**  (I am ignoring the importance of a president’s veto power for the moment.) Despite the much publicized and celebrated instances of presidential arm-twisting during the legislative endgame, then, **most legislative outcomes don’t depend on presidential lobbying**.  But this is not to say that presidents lack influence.  Instead, the primary means by which presidents influence what Congress does is through their ability to determine the alternatives from which Congress must choose.  That is, **presidential power is largely an exercise in agenda-setting** – not arm-twisting.   And we see this in the Sotomayer nomination.  Barring a major scandal, she will almost certainly be confirmed to the Supreme Court whether Obama spends the confirmation hearings calling every Senator or instead spends the next few weeks ignoring the Senate debate in order to play Halo III on his Xbox.  That is, how senators decide to vote on Sotomayor will have almost nothing to do with Obama’s lobbying from here on in (or lack thereof).  His real influence has already occurred, in the decision to present Sotomayor as his nominee.

#### No impact – their evidence is political posturing

Taylor Marsh October 25, 2012 “Move to Stop Obama s Bad Lame Duck Entitlement Deal has Already Begun” Lexis

It is known in Washington as the fiscal cliff. But policy and economic analysts projecting its complicated and wide-ranging potential impact said the term fiscal hill or fiscal slope might be more apt: the effect would be powerful but gradual, and in some cases, reversible. The slope would likely be relatively modest at first, Chad Stone, the chief economist at the Center on Budget and Policy Priorities, a research group based in Washington, wrote in a recent analysis. A relatively brief implementation of the tax and spending changes required by current law should cause little short-term damage to the economy as a whole. [...] Moreover, while the fiscal cliff would be enormous in annual terms, its effect would be cumulative, not immediate, analysts have noted. Households hit by the tax increases might not notice the $10 or $100 missing from their paychecks, even if it would damp their spending over the course of the year. Agencies hit by the spending cuts might not act immediately. There is absolutely no need to ram through a fiscal cliff deal before January, but that s what you ll hear. It s timed perfectly with the holidays when people are tuning out, after an election that s exhausted everyone. The gaping maw of economic reality, however, revolves around one irrefutable fact. If we get the economy moving the deficit would not give reason for panic. The goal is to stop a deal in the lame duck. The effort has already begun.

#### Economic decline doesn’t cause shooting wars

Miller 2k

(Morris, economist, adjunct professor in the University of Ottawa’s Faculty of Administration, consultant on international development issues, former Executive Director and Senior Economist at the World Bank, Winter, Interdisciplinary Science Reviews, Vol. 25, Iss. 4, “Poverty as a cause of wars?” p. Proquest)

The question may be reformulated. Do wars spring from a popular reaction to a sudden economic crisis that exacerbates poverty and growing disparities in wealth and incomes? Perhaps one could argue, as some scholars do, that it is some dramatic event or sequence of such events leading to the exacerbation of poverty that, in turn, leads to this deplorable denouement. This exogenous factor might act as a catalyst for a violent reaction on the part of the people or on the part of the political leadership who would then possibly be tempted to seek a diversion by finding or, if need be, fabricating an enemy and setting in train the process leading to war. According to a study undertaken by Minxin Pei and Ariel Adesnik of the Carnegie Endowment for International Peace, there would not appear to be any merit in this hypothesis. After studying ninety-three episodes of economic crisis in twenty-two countries in Latin America and Asia in the years since the Second World War theyconcluded that:19 Much of the conventional wisdom about the political impact of economic crises may be wrong ... The severity of economic crisis - as measured in terms of inflation and negative growth - bore no relationship to the collapse of regimes ... (or, in democratic states, rarely) **to** an outbreak of violence ... In the cases of dictatorships and semidemocracies, the ruling elites responded to crises by increasing repression (thereby using one form of violence to abort another).

## 1AR

### NNSA DA

#### NNSA worker shortage now- structural factors prevent hiring and retention- and increasing pool of applicants is key to solve

Walker 12

Molly Bernhart

<http://www.fiercegovernment.com/story/nnsa-could-soon-face-workforce-gaps-struggles-monitor-them/2012-05-01> ETB

The National Nuclear Security Administration and the contractors who operate the national lab sites for NNSA may soon face a workforce shortage, according to an April 26 Government Accountability Office [report](http://gao.gov/assets/600/590488.pdf) (.pdf).¶ NNSA's hiring and retention efforts have typically focused on "attracting early career hires with competitive pay and development opportunities," but the positions may not be appealing to today's young workers, say report authors.¶ NNSA "staff must often work in secure areas that prohibit the use of personal cell phones, e-mail, and social media, which is a disadvantage in attracting younger skilled candidates," says GAO.¶ The isolated location of the sites also means career opportunities for candidates' spouses are limited. What's more, the pool of qualified applicants is dwindling. Many of the most qualified applicants from top science, technology, and engineering programs are not U.S. citizens and would be unable to obtain security clearances, says GAO.

#### Workforce shortage now

NAS News 12

<http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=05142012> ETB

The need for U.S. nuclear and radiochemistry expertise in areas such as nuclear medicine, nuclear power, nuclear security, and radioactive waste cleanup and disposal require a highly trained work force.  A new report from the National Research Council, ASSURING A FUTURE U.S.-BASED NUCLEAR AND RADIOCHEMISTRY EXPERTISE,finds that the needs for this expertise are barely being met and that future needs may not be met by the projected supply of workers.  To avoid a gap in these critical areas, the report recommends ways to avoid a shortage of nuclear and radiochemists in the future, including formalizing collaborative partnerships for research and education, providing on-the-job training in national laboratories and industry, and identifying and prioritizing urgent requirements by federal agencies.

### Terror

#### Magnitude outweighs probability- comparatively outweighs middle east war

Levi and Zenko 10/28

Michael Levi and Micah Zenko are fellows at the Council on Foreign Relations.

<http://www.usatoday.com/story/opinion/2012/10/28/column-nuclear-terror-goes-poof/1664299/> ETB

But one needn't believe that a nuclear attack is probable to conclude that it should be a top-tier priority. Nuclear terrorism, however unlikely, is one of the few prospects that could truly devastate the USA. An atomic bomb detonated in a crowded downtown area could kill hundreds of thousands of Americans promptly. On this scale, no other threat — such as fears of a cyber Pearl Harbor or ongoing turmoil in the Middle East — compares.

### CP

#### Offense defense paradigm is bad:

#### Teaches poor argumentative skills because it prevents us from evaluating defensive arguments that hold a lot of weight- to say there is “risk of offense” is non sensical in the real world. Also forces teams to read silly impact turns just to gain offense- that leads to stale debate that isn’t germane to the topic

#### Privileges the neg- its impossible to reduce risk of offense to zero- in their framework the neg always wins

#### Good should be good enough- incredibly small risk of a net benefit means you should vote aff- presumption shifts aff when neg reads a CP

#### Readiness is doomed – Burns evidence says the army has become a “thin green line” that could snap – there is a recruiting slump and it can’t match the demands of war – top Army generals agree

#### Even their 1NC evidence says that readiness will die because funding is being cut

#### Hard power is too high for anyone to catch up – Friedman and Preble says that our rivals lag behind in military capabilities – that’s true even with a cut in training programs – we spend 5X more than the great powers combined

#### Military power does not translate into security.

Hachigan and Sutphen 08

(Nina, Senior Fellow at American Progress, senior political scientist at RAND Corporation and served as the director of the RAND Center for Asia Pacific Policy for four years, From 1998 to 1999, Hachigian was on the staff of the National Security Council in the White House, Monica Sutphen, Stanford Center for International Security, 2008, The Next American Century, p. 168-9

*IN PRACTICE*, the strategy of primacy failed to deliver. While the fact of being the world’s only superpower has substantial benefits, a national security strategy based on pursuing and maintaining primacy has not made America more secure. America’s military might has not been the answer to terrorism, disease, climate change, or proliferation. Iraq, Iran, and North Korea have become more dangerous in the last seven years, not less. Worse than being ineffective with transnational threats and smaller powers, a strategy of maintaining primacy is counterproductive when it comes to pivotal powers. If America makes primacy the main goal of its national security strategy, then why shouldn’t the pivotal powers do the same? A goal of primacy signals that sheer strength is most critical to security. American cannot trumpet its desire to dominate the world military and then question why China is modernizing its military.

#### No escalation

Fettweis 7

Asst Prof Poli Sci – Tulane, Asst Prof National Security Affairs – US Naval War College, 7

(Christopher, “On the Consequences of Failure in Iraq,” *Survival*, Vol. 49, Iss. 4, December, p. 83 – 98)

Without the US presence, a second argument goes, nothing would prevent Sunni-Shia violence from sweeping into every country where the religious divide exists. A Sunni bloc with centres in Riyadh and Cairo might face a Shia bloc headquartered in Tehran, both of which would face enormous pressure from their own people to fight proxy wars across the region. In addition to intra-Muslim civil war, cross-border warfare could not be ruled out. Jordan might be the first to send troops into Iraq to secure its own border; once the dam breaks, Iran, Turkey, Syria and Saudi Arabia might follow suit. The Middle East has no shortage of rivalries, any of which might descend into direct conflict after a destabilising US withdrawal. In the worst case, Iran might emerge as the regional hegemon, able to bully and blackmail its neighbours with its new nuclear arsenal. Saudi Arabia and Egypt would soon demand suitable deterrents of their own, and a nuclear arms race would envelop the region. Once again, however, none of these outcomes is particularly likely.Wider war No matter what the outcome in Iraq, the region is not likely to devolve into chaos. Although it might seem counter-intuitive, by most traditional measures the Middle East is very stable. Continuous, uninterrupted governance is the norm, not the exception; most Middle East regimes have been in power for decades. Its monarchies, from Morocco to Jordan to every Gulf state, have generally been in power since these countries gained independence. In Egypt Hosni Mubarak has ruled for almost three decades, and Muammar Gadhafi in Libya for almost four. The region's autocrats have been more likely to die quiet, natural deaths than meet the hangman or post-coup firing squads. Saddam's rather unpredictable regime, which attacked its neighbours twice, was one of the few exceptions to this pattern of stability, and he met an end unusual for the modern Middle East. Its regimes have survived potentially destabilising shocks before, and they would be likely to do so again. The region actually experiences very little cross-border warfare, and even less since the end of the Cold War. Saddam again provided an exception, as did the Israelis, with their adventures in Lebanon. Israel fought four wars with neighbouring states in the first 25 years of its existence, but none in the 34 years since. Vicious civil wars that once engulfed Lebanon and Algeria have gone quiet, and its ethnic conflicts do not make the region particularly unique. The biggest risk of an American withdrawal is intensified civil war in Iraq rather than regional conflagration. Iraq's neighbours will likely not prove eager to fight each other to determine who gets to be the next country to spend itself into penury propping up an unpopular puppet regime next door. As much as the Saudis and Iranians may threaten to intervene on behalf of their co-religionists, they have shown no eagerness to replace the counter-insurgency role that American troops play today. If the United States, with its remarkable military and unlimited resources, could not bring about its desired solutions in Iraq, why would any other country think it could do so?17 Common interest, not the presence of the US military, provides the ultimate foundation for stability. All ruling regimes in the Middle East share a common (and understandable) fear of instability. It is the interest of every actor - the Iraqis, their neighbours and the rest of the world - to see a stable, functioning government emerge in Iraq. If the United States were to withdraw, increased regional cooperation to address that common interest is far more likely than outright warfare.

### Politics

### 1AR No Pass

#### No bipart deal now

Leonhardt 11/10/2012

(David, David Leonhardt is the Washington bureau chief of The New York Times. “The Cliff Is a Hard Place to Compromise” <http://www.nytimes.com/2012/11/11/sunday-review/the-cliff-is-a-hard-place-to-compromise.html> - Kurr)

For now, Republicans have signaled some openness to accepting higher taxes. But they and the Democrats remain far apart, on both the overall size and the composition of a tax agreement. (Republicans say they will accept only the closing of loopholes, not the higher rates that would come from the expiration of the Bush tax cuts on upper income.)

Given the administration’s repeated failure to win over Republicans in its first term, Obama advisers have been talking for weeks about whether he could stand firm and allow the scheduled changes to take effect on Jan. 1. Doing so might hurt a still-vulnerable economy, by leaving consumers with less money and reducing government spending. The reaction from markets may aggravate the situation.

But going over the so-called cliff also has the potential to be less bad than feared. It would be a slow accumulation of economic changes and not entirely unexpected, which is very different from defaulting on the country’s debt payments, as nearly happened during the 2011 debt-ceiling talks. Democrats have begun making this point more loudly, in part to send the message that they are willing to accept the scheduled budget changes if need be.

“For the president to have any leverage, he has to make the Republicans believe he is willing to let the tax cuts expire,” said James R. Horney of the Center on Budget and Policy Priorities, which has close ties to the White House and Congressional Democrats. “The only way, I suspect, that he can convince them he is willing to let that happen is to actually let it happen.”

Republicans, having absorbed defeat and seen the polls showing that Americans consider their party less willing to compromise than Mr. Obama, may well decide to do so before Jan. 1. House leaders spoke of compromise last week. But betting on an unexpectedly smooth bipartisan deal generally hasn’t been the smart move lately.

### 1AR Pol Cap Not Key

#### 8% chance of the internal link – their author

Beckmann and Kumar 11

Matthew N Beckmann and Vimal Kumar 11, Associate Professor of Political Science at UC Irvine, econ prof at the Indian Institute of Tech, “Opportunism in Polarization”, Presidential Studies Quarterly; Sep 2011; 41, 3

The final important piece in our theoretical model—presidents' political capital— also finds support in these analyses, though the results here are less reliable. Presidents operating under the specter of strong economy and high approval ratings get an important, albeit moderate, increase in their chances for prevailing on "key" Senate roll-call votes (b = .10, se = .06, p < .10). Figure 4 displays the substantive implications of these results in the context of polarization, showing that going from the lower third of political capital to the upper third increases presidents' chances for success by 8 percentage points (in a setting like 2008). Thus, political capital's impact does provide an important boost to presidents' success on Capitol Hill, but it is certainly not potent enough to overcome basic congressional realities. Political capital is just strong enough to put a presidential thumb on the congressional scales, which often will not matter, but can in close cases.

# Round 6 v Michigan CM

## 1AC

#### Same as round 2

## 2AC

### 2AC Accidents (Generic)

#### No accidents

Loudermilk 11

(Micah J. Loudermilk is a Research Associate for the Energy & Environmental Security Policy program with the Institute for National Strategic Studies at National Defense University, “Small Nuclear Reactors and US Energy Security: Concepts, Capabilities, and Costs” Journal of Energy Security, May 2011, <http://www.ensec.org/index.php?option=com_content&view=article&id=314:small-nuclear-reactors-and-us-energy-security-concepts-capabilities-and-costs&catid=116:content0411&Itemid=375>)

Promoting safer nuclear power¶ The debate over nuclear energy over the years has consistently revolved around the central question “Is nuclear power safe?” Certainly, the events at Fukushima illustrate that nuclear power can be unsafe, however, no energy source is without its own set of some inherent risks on the safety front—as last year’s oil spill in the Gulf of Mexico or the long-term environmental consequences of fossil fuel use demonstrate—and nuclear power’s operating record remains significantly above that of other energy sources. Instead, accepting the role that nuclear energy plays in global electricity generation, especially in a clean-energy environment, a more pointed question to ask is “How can nuclear power be made safer?”¶ Although large reactors possess a stellar safety record throughout their history of operation, SMRs are able to take safety several steps further, in large part due to their small size. Due to simpler designs as a result of advancing technology and a heavy reliance on passive safety features, many problems plaguing larger and earlier generations of reactors are completely averted. Simpler designs mean less moving parts, less potential points of failure or accident, and fewer systems for operators to monitor. Additionally, small reactor designs incorporate passive safety mechanisms which rely on the laws of nature—such as gravity and convection—as opposed to human-built systems requiring external power to safeguard the reactor in the event of an accident, making the reactor inherently safer.¶ Furthermore, numerous small reactor concepts incorporate other elements—such as liquid sodium—as coolants instead of the pressurized water used in large reactors today. While sodium is a more efficient heat-transfer material, it is also able to cool the reactor core at normal atmospheric pressure, whereas water which must be pressurized at 100-150 times normal to prevent it boiling away. As an additional passive safety feature, sodium’s boiling point is 575-750 degrees higher than the reactor’s operating temperature, providing an immense natural heat sink in the event that the reactor overheats. Even should an accident occur, without a pressurized reactor no radiation would be released into the surrounding environment.¶ Even on the most basic level, small reactors provide a greater degree of security by merit of providing lower energy output and using less nuclear fuel. To make up for the loss in individual reactor generating capacity, small reactors are generally designed as scalable units, enabling the siting of multiple units in one location to rival the output capacity of a large nuclear plant. However, with each reactor housed independently and powering its own steam turbine, an accident affecting one reactor would be limited to that individual reactor.

### Procurement T

#### 1. We meet- plan creates incentives and secures a market for nuclear energy

#### 2. We meet- paying them is the financial incentive

We meet- decrease costs through econs of scale

#### 3. Counter interpretation- financial incentives are disbursement of public funds or contingent commitments

Webb 93

(lecturer in the Faculty of Law at the University of Ottawa (Kernaghan, “Thumbs, Fingers, and Pushing on String: Legal Accountability in the Use of Federal Financial Incentives”, 31 Alta. L. Rev. 501 (1993) Hein Online)

In this paper, "financial incentives" are taken to mean disbursements 18 of public funds or contingent commitments to individuals and organizations, intended to encourage, support or induce certain behaviours in accordance with express public policy objectives. They take the form of grants, contributions, repayable contributions, loans, loan guarantees and insurance, subsidies, procurement contracts and tax expenditures.19 Needless to say, the ability of government to achieve desired behaviour may vary with the type of incentive in use: up-front disbursements of funds (such as with contributions and procurement contracts) may put government in a better position to dictate the terms upon which assistance is provided than contingent disbursements such as loan guarantees and insurance. In some cases, the incentive aspects of the funding come from the conditions attached to use of the monies.20 In others, the mere existence of a program providing financial assistance for a particular activity (eg. low interest loans for a nuclear power plant, or a pulp mill) may be taken as government approval of that activity, and in that sense, an incentive to encourage that type of activity has been created.21 Given the wide variety of incentive types, it will not be possible in a paper of this length to provide anything more than a cursory discussion of some of the main incentives used.22 And, needless to say, the comments made herein concerning accountability apply to differing degrees depending upon the type of incentive under consideration.¶ By limiting the definition of financial incentives to initiatives where *public funds are either disbursed or contingently committed*, a large number of regulatory programs with incentive *effects* which exist, but in which no money is forthcoming,23 are excluded from direct examination in this paper. Such programs might be referred to as *indirect* incentives. Through elimination of indirect incentives from the scope of discussion, thedefinition of the incentive instrument becomes both more manageable and more particular. Nevertheless, it is possible that much of the approach taken here may be usefully applied to these types of indirect incentives as well.24 Also excluded from discussion here are social assistance programs such as welfare and *ad hoc* industry bailout initiatives because such programs are not designed primarily to *encourage* behaviours in furtherance of specific public policy objectives. In effect, these programs are assistance, but they are not incentives.

#### Ground- it is grounded in the literature and is the only way to intrinsically keep military affs in the topic which are key to beat states counterplans, and it links much harder to disads

#### Predictability- our evidence has a definitive list and an intent to define, and is supported in the literature

#### Limits- only adds procurement affs to their list, but limits out all indirect incentive effects their allows

#### Education- key to talk about different actors use of energy and how energy’s connection to the military, and no aff makes sense where the government is the consumer

#### Precision – our definition’s from the DoE

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.

#### Reasonability key to prevent a race to the most limiting definition

### Heidegger

**Death outweighs**

Amien **Kacou. 2008**. WHY EVEN MIND? On The A Priori Value Of “Life”, Cosmos and History: The Journal of Natural and Social Philosophy, Vol 4, No 1-2 (2008) cosmosandhistory.org/index.php/journal/article/view/92/184

Furthermore, that manner of finding things good that is in pleasure can certainly not exist in any world without consciousness (i.e., without “life,” as we now understand the word)—slight analogies put aside. In fact, we can begin to develop a more sophisticated definition of the concept of “pleasure,” in the broadest possible sense of the word, as follows: it is the common psychological element in all psychological experience of goodness (be it in joy, admiration, or whatever else). In this sense, pleasure can always be pictured to “mediate” all awareness or perception or judgment of goodness: there is pleasure in all consciousness of things good; pleasure is the common element of all conscious satisfaction. In short, it is simply the very experience of liking things, or the liking of experience, in general. In this sense, pleasure is, not only uniquely characteristic of life but also, the core expression of goodness in life—the most general sign or phenomenon for favorable conscious valuation, in other words. This does not mean that “good” is absolutely synonymous with “pleasant”—what we value may well go beyond pleasure. (The fact that we value things needs not be reduced to the experience of liking things.) However, what we value beyond pleasure remains a matter of speculation or theory. Moreover, we note that a variety of things that may seem otherwise unrelated are correlated with pleasure—some more strongly than others. In other words, there are many things the experience of which we like. For example: the admiration of others; sex; or rock-paper-scissors. But, again, what they are is irrelevant in an inquiry on a priori value—what gives us pleasure is a matter for empirical investigation. Thus, we can see now that, in general, something primitively valuable is attainable in living—that is, pleasure itself. And it seems equally clear that we have a priori logical reason to pay attention to the world in any world where pleasure exists. Moreover, we can now also articulate a foundation for a security interest in our life: since the good of pleasure can be found in living (to the extent pleasure remains attainable),[17] and only in living, therefore, a priori, life ought to be continuously (and indefinitely) pursued at least for the sake of preserving the possibility of finding that good. However, this platitude about the value that can be found in life turns out to be, at this point, insufficient for our purposes. It seems to amount to very little more than recognizing that our subjective desire for life in and of itself shows that life has some objective value. For what difference is there between saying, “living is unique in benefiting something I value (namely, my pleasure); therefore, I should desire to go on living,” and saying, “I have a unique desire to go on living; therefore I should have a desire to go on living,” whereas the latter proposition immediately seems senseless? In other words, “life gives me pleasure,” says little more than, “I like life.” Thus, we seem to have arrived at the conclusion that the fact that we already have some (subjective) desire for life shows life to have some (objective) value. But, if that is the most we can say, then it seems our enterprise of justification was quite superficial, and the subjective/objective distinction was useless—for all we have really done is highlight the correspondence between value and desire. Perhaps, our inquiry should be a bit more complex.

#### Only by combining methods can we avoid fragmentation and facilitate real political change to prevent planetary extinction – even if the perm risks cooption the apocalyptic imagery of the aff is rejuvenating to ecocriticism

JL Schatz. 2012. Professor of English and Feminist Evolutionary Studies & Director of Debate at Binghamton University. The Importance of Apocalypse: The Value of End-Of-The-World Politics While Advancing Ecocriticism. Journal of Ecocriticism: A New Journal of Nature, Society and Literature. 4(2)

There are three things ecocriticism must keep in mind to retain its effectiveness in the poststructuralist era. First and foremost ecocritics must not allow their infighting over tactics and academic maneuvers to become debilitating. Ecocritics have enough on their plate fighting dominant political institutions. To never directly take up arms against ecologically destructive practices will merely cede potential avenues of resistance while we fight amongst ourselves. We must take from those ecocritics we partially disagree with what we can and then operate from a different platform so as to always be spectral in our resistance. Adopting varied tactics enables an ecological coalition centered on the connectedness that arises from the belief that we all have a shared stake in the planet. Awakening to our collective stake in the environment can overcome the illusionary boundaries of the nation-­‐state, species, or even sentience. Every molecule of the Earth’s ecology is interconnected. When one part dies we all stand on the brink of extinction. For ecocriticism to embrace this interconnection it must not erect borders between different approaches so long as the foundation of the struggle is premised upon the commons of our universe. Unfortunately, “what characterizes much campus left discourse is a substitution of moral rhetoric about evil policies[, leaving] ... absent ... a sober reckoning with the preoccupations and opinions of the vast majority of Americans ... who do not believe that the discourse of ‘anti-­‐imperialism’ speaks to their lives” (Isaac). As a result, there is a need for ecocritics to not just speak to the choir that mostly already agrees with them. They must also speak to the populations who don’t intuitively see the link between imperialism, technology, and capitalism with environmental destruction. Apocalyptic rhetoric can do precisely that because of its underlying tenant of self-­preservation. The above point is absolutely crucial because ecocriticism cannot be effective if its focus never goes beyond the individual alone. No single person is the entire ecology so no individual can save it. While each individual undoubtedly impacts the environment and can cause change, no large scale transformation can take place if we never inspire collective action. In evolutionary terms, ideas, thoughts, and actions must be passed on in order to survive. For that to happen it takes a combined effort, even though it can start by a single mutation. Luke reminds us that the typical consumer does not control the critical aspects of his or her existence[.] ... The absurd claim that average consumers only need to shop, bicycle, or garden their way to an ecological future merely moves most of the responsibility and much of the blame away from the institutional centers of power whose decisions actually maintain the wasteful, careless ways of material exchange[. It also] ... ignores how corporate capital, big government, and professional experts pushed the practices of ... affluent society ... as a political strategy to sustain economic growth, forestall mass discontent, and empower scientific authority. People did choose to live this way, but their choices were made from a very narrow array of alternatives presented to them as rigidly structured, prepackaged menus of very limited options. (Luke, 1997: 127-­‐128) In turn, ecocritics must not displace the blame away from current hegemonic structures by calling on individuals to act alone. Instead ecocriticism must articulate its arguments to influence change in both institutions of power and the very people whose mindsets make up the current collective. Many environmental groups have been able to do precisely that. For instance, “NGOs and social movements active in global civil society have ... introduce[ed] ... dystopian scenarios ... as rhetorical devices that act as ‘wake-­up calls’... to jolt citizens out of their complacency and ... foster ... public deliberation about the potential cataclysms facing humankind” (Kurasawa 464). Ecocritics must not cut down such NGOs for adopting end-­of-­the-­world tactics even though their rhetoric might get co-opted when specific policies get enacted. Secondly, ecocriticism must never forget that what they do is politics. There are two implications to this. On the one hand it means that activists who directly lobby the government should not denounce the academically-oriented ecocritic for struggling within the academy. On the other hand it means that those who denounce the managerial tendencies that come along with governmental policies shouldn’t condemn activists who operate within the system. Instead of attacking one another, ecocritics should understand opposing discourses and ontologies as part of a spectral strategy that works against the environmental imperialism of the status-quo. We should take each opportunity for its fullest even in the face of failure. Once we acknowledge the virtual inevitability of co-optation the emphasis should be on creating successive struggles from a variety of standpoints. Captain Paul Watson, for instance, does not merely pack up his flagship the Steve Irwin and head home after the Japanese whaling season ends. He goes on to fight for seals, dolphins, and a number of other animals all the while participating within a larger discourse surrounding planetary ecology. Not all of Watson’s tactics have been successful. Neither has anyone else’s. However, that doesn’t mean we should give up. Quite the opposite. For example, just because revolutionaries like Che Guevara have been turned into trendy t-­‐shirts, fueling the industries of capitalism, doesn’t mean he shouldn’t have fought against imperialism in the first place. In the same way, just because environmental activists are inevitably going to fall victim to constructing an image of the planet on the brink of extinction, it doesn’t mean that we should discount their battles against such destruction. Their counter constructions enable a contestation over what it means to be human in relationship to the rest of the world. Absent these counter narratives only a singular construction of anthropocentric managerial domination would exist. A consequence to this second point is that the willingness to continually deploy different tactics is more powerful for ecocriticism than coming up with the perfect strategy. That way even when we become co-opted in one place we are already struggling from somewhere else. In turn, ecocriticism should focus on the underlying motivations that compel others to act in order to determine which ecocritics to be allies with. Through this way human beings can repair the willed manipulation inherent in calculative thinking and realize a patient equanimity toward Life. It is only in the context of this reawakened sense of the unity of life that revolutionary action gains an authentic basis. It is the engagement with “the Other” that shows the ELF actions are truly about defense of plant and animal life, and they demonstrate genuine liberation concerns that typically are trapped within Enframing. That is to say, ELF (and similar) actions, show themselves as part of a ... profound solidarity ... [that] serves as a general basis for a post-­‐Enframing, post-­‐capitalist order, an ecological, not a capitalist society. (Best and Nocella 83) This shift allows ecocriticism to formulate ever-­‐greater coalitions while at the same time preventing a descent into moral relativism. We can still utilize political action by eco-activists and NGOs such as PETA and Greenpeace productively, even if they result in reformist managerialism, so long as the sole focus doesn’t fall upon a singular tactic. Only a profound orientation of solidarity will ever have the hopes of succeeding. Everything we do is deeply political and we must understand that in acting or in thinking we necessarily impact the world. Uniting behind images of planetary omnicide holds the potential to collectively bring us together by awakening humanity to its shared stake in the global environment. Third, and most importantly, ecocritics must adopt tactics that can most effectively influence other people without proscribing end goals. By this I mean that ecocritics must use those tools that can appeal to the masses while simultaneously making their appeals in such a way as not to force a choice upon them. Apocalyptic imagery is ideal for this task. It appeals to notions of shared planetary concerns that serve as motivation for others to act, even without fully knowing how the apocalypse can truly be averted. By creating a compelling urge to do something that arises out of the image of planetary annihilation ecocriticism can influence a variety of people to take up arms through a multitude of techniques. Society as a whole will never mobilize to halt the very practices that threaten life without such compelling inspiration. When ecocriticism helps other people see how certain actions risk their very survival it will enable our planet to evolve differently. So long as ecocriticism never gives up on the struggle, even if this different direction may bring new scenarios of apocalypse, humanity as a species can continually evolve its patterns and behaviors to advert extinction. This is not to say we will live forever. Rather it is to say that as a species we can continue to exist in harmony with the lives all around us and give our deaths meaning. Ultimately, it is through imagining the end of the world that we will be able to envision how to save it.

#### Nuclear technocracy’s key to solve

Nordhaus 11, chairman – Breakthrough Instiute, and Shellenberger, president – Breakthrough Insitute, MA cultural anthropology – University of California, Santa Cruz, 2/25/‘11

(Ted and Michael, <http://thebreakthrough.org/archive/the_long_death_of_environmenta>)

Tenth, we are going to have to get over our suspicion of technology, especially nuclear power. There is no credible path to reducing global carbon emissions without an enormous expansion of nuclear power. It is the only low carbon technology we have today with the demonstrated capability to generate large quantities of centrally generated electrtic power. It is the low carbon of technology of choice for much of the rest of the world. Even uber-green nations, like Germany and Sweden, have reversed plans to phase out nuclear power as they have begun to reconcile their energy needs with their climate commitments. Eleventh, we will need to embrace again the role of the state as a direct provider of public goods. The modern environmental movement, borne of the new left rejection of social authority of all sorts, has embraced the notion of state regulation and even creation of private markets while largely rejecting the generative role of the state. In the modern environmental imagination, government promotion of technology - whether nuclear power, the green revolution, synfuels, or ethanol - almost always ends badly. Never mind that virtually the entire history of American industrialization and technological innovation is the story of government investments in the development and commercialization of new technologies. Think of a transformative technology over the last century - computers, the Internet, pharmaceutical drugs, jet turbines, cellular telephones, nuclear power - and what you will find is government investing in those technologies at a scale that private firms simply cannot replicate. Twelveth, big is beautiful. The rising economies of the developing world will continue to develop whether we want them to or not. The solution to the ecological crises wrought by modernity, technology, and progress will be more modernity, technology, and progress. The solutions to the ecological challenges faced by a planet of 6 billion going on 9 billion will not be decentralized energy technologies like solar panels, small scale organic agriculture, and a drawing of unenforceable boundaries around what remains of our ecological inheritance, be it the rainforests of the Amazon or the chemical composition of the atmosphere. Rather, these solutions will be: large central station power technologies that can meet the energy needs of billions of people increasingly living in the dense mega-cities of the global south without emitting carbon dioxide, further intensification of industrial scale agriculture to meet the nutritional needs of a population that is not only growing but eating higher up the food chain, and a whole suite of new agricultural, desalinization and other technologies for gardening planet Earth that might allow us not only to pull back from forests and other threatened ecosystems but also to create new ones. The New Ecological Politics The great ecological challenges that our generation faces demands an ecological politics that is generative, not restrictive. An ecological politics capable of addressing global warming will require us to reexamine virtually every prominent strand of post-war green ideology. From Paul Erlich's warnings of a population bomb to The Club of Rome's "Limits to Growth," contemporary ecological politics have consistently embraced green Malthusianism despite the fact that the Malthusian premise has persistently failed for the better part of three centuries. Indeed, the green revolution was exponentially increasing agricultural yields at the very moment that Erlich was predicting mass starvation and the serial predictions of peak oil and various others resource collapses that have followed have continue to fail. This does not mean that Malthusian outcomes are impossible, but neither are they inevitable. We do have a choice in the matter, but it is not the choice that greens have long imagined. The choice that humanity faces is not whether to constrain our growth, development, and aspirations or die. It is whether we will continue to innovate and accelerate technological progress in order to thrive. Human technology and ingenuity have repeatedly confounded Malthusian predictions yet green ideology continues to cast a suspect eye towards the very technologies that have allowed us to avoid resource and ecological catastrophes. But such solutions will require environmentalists to abandon the "small is beautiful" ethic that has also characterized environmental thought since the 1960's. We, the most secure, affluent, and thoroughly modern human beings to have ever lived upon the planet, must abandon both the dark, zero-sum Malthusian visions and the idealized and nostalgic fantasies for a simpler, more bucolic past in which humans lived in harmony with Nature.

#### Managerialism is necessary to prevent global extinction –processes of environmental destruction are unstoppable without intervention

Dr Neil Levy 1999. Fellow of the Centre for Applied Philosophy and Public Ethics at Charles Sturt University. “Discourses of the Environment” p. 215

If the ‘technological fix’ is unlikely to be more successful than strategies of limitation of our uses of resources, we are nevertheless unable to simply leave the environment as it is. There is a real and pressing need for more, and more accurate, technical and scientific information about the non-human world. For we are faced with a situation in which the processes we have already set in train will continue to impact upon that world, and therefore us, for centuries. It is therefore necessary, not only to stop cutting down the rain forests, but to develop real, concrete proposals for action, to reverse, or at least limit, the effects of our previous interventions. More over, there is another reason why our behaviour towards the non-human cannot simply be a matter of leaving it as it is, at least in so far as our goals are not only environmental but also involve social justice. For if we simply preserve what remains to us of wilderness, of the countryside and of park land, we also preserve patterns of very unequal access to their resources and their consolations (Soper 1995: 207). In fact, we risk exacerbating these inequalities. It is no us, but the poor of Brazil, who will bear the brunt of the misery which would result form a strictly enforced policy of leaving the Amazonian rain forest untouched, in the absence of alternative means of providing for their livelihood. It is the development of policies to provide such ecologically sustainable alternative which we require, as well as the development of technical means for replacing our current greenhouse gas-emitting sources of energy. Such policies and proposals for concrete action must be formulated by ecologists, environmentalist, people with expertise concerning the functioning of ecosystems and the impacts which our actions have upon them. Such proposals are, therefore, very much the province for Foucault’s specific intellectual, the one who works ‘within specific sectors, at the precise points where their won conditions of life or work situate them’ (Foucault 1980g: 126). For who could be more fittingly described as ‘the strategists of life and death’ than these environmentalists? After the end of the Cold War, it is in this sphere, more than any other, that man’s ‘politics places his existence as a living being in question’ (Foucault 1976: 143). For it is in facing the consequences of our intervention in the non-human world that the fate of our species, and of those with whom we share this planet, will be decided.

#### Tech Space exploration results from our viewing of space as an infinite standing reserve, the supreme manifestation of the danger of technology.

Soccio in 09 (Douglas J., Professor of Philosophy @ Shasta University Archetypes of Wisdom: An Introduction to Philosophy Seventh Edition The Age of Technology: Danger p.515, 2009) JM

We measure—“order”—the cosmos itself, looking to outer space for new sources of energy to add to the ever-expanding standing-reserve. When nature as a whole is threatened by technology, we employ technology to count and record (“order”) endangered species via wireless transmitters. We scientifically analyze soil and air samples, track storms via satellite, and obsessively tweak additives and supplements to enhance our food supply. We seek out new superdrugs to kill off superbugs created by older drugs crafted to kill off older bugs. Yet in these very attempts to control the world and to come to technically “correct” understandings of the world, “the truth will withdraw,” Heidegger warns. Correct, calculative, objective understanding of particulars, though not sufficient for grasping the truth of existence, is potently useful, seductive, and distracting and induces complacency. This, says Heidegger, is “the supreme danger” of technology, a danger rooted in our overall indifference to every- thing that is not part of the standing-reserve. So long as we are chiefly inter- ested in things as means, as instruments, as standing-reserve, we inevitably come to a point where we take ourselves for standing-reserve. Then, ironically and monstrously, . . . precisely as the one so threatened, [man] exalts himself to the posture of the lord of the earth. In this way the illusion comes to prevail that everything man encounters exists only insofar as it is his construct. This illusion gives rise in turn to one final delusion: it seems as though man everywhere and always encounters only himself. . . . In truth, however, precisely nowhere does man today any longer encounter himself, i.e., his essence.

#### extinction

Schulze-Makuch and Davies 2010 (Dirk Schulze-Makuch, Ph.D., School of Earth and Environmental Sciences, Washington State University and Paul Davies, Ph.D., Beyond Center, Arizona State University, “To Boldly Go: A One-Way Human Mission to Mars”, <http://journalofcosmology.com/Mars108.html>)

There are several reasons that motivate the establishment of a permanent Mars colony. We are a vulnerable species living in a part of the galaxy where cosmic events such as major asteroid and comet impacts and supernova explosions pose a significant threat to life on Earth, especially to human life. There are also more immediate threats to our culture, if not our survival as a species. These include global pandemics, nuclear or biological warfare, runaway global warming, sudden ecological collapse and supervolcanoes (Rees 2004). Thus, the colonization of other worlds is a must if the human species is to survive for the long term. The first potential colonization targets would be asteroids, the Moon and Mars. The Moon is the closest object and does provide some shelter (e.g., lava tube caves), but in all other respects falls short compared to the variety of resources available on Mars. The latter is true for asteroids as well. Mars is by far the most promising for sustained colonization and development, because it is similar in many respects to Earth and, crucially, possesses a moderate surface gravity, an atmosphere, abundant water and carbon dioxide, together with a range of essential minerals. Mars is our second closest planetary neighbor (after Venus) and a trip to Mars at the most favorable launch option takes about six months with current chemical rocket technology.

#### Onological thought has been socialized, internalized, and can’t be eradicated

**Leach 3**, date page modified (Neil, Professor at the University of Southern California, “Forget Heidegger”, August 15, <http://www.china-designer.com/magazine/leach/txt1.htm>)

Adorno's further example of the car reveals how the technological has come to colonise our everyday lives not as standing reserve, but as something to which symbolic intention is always already being 'attached'. The point here is that we have to understand that our engagement with technology involves a moment of 'proprioception'. Technology may come to operate as a form of 'prosthesis' to the human body that is appropriated such that it becomes part of the motility of the body. In driving a car we come to navigate the road through that car. As such, the car as an item of technology is not divorced - alienated - from the body. Indeed it becomes a form of extension to that body. What I am arguing here is not some simplistic manifesto for cyborgs, claiming that human beings can become part human and part machine. Rather I am trying to tease out the logic of mimesis itself. For according to this logic, human beings have absorbed technology at an unconscious level, such that they have come to operate through technology, as though by way of some tele-kinesis.

Not only this, but technology may actually influence the way that human beings think. It may itself affect our consciousness. Let us take the example of the computer. For, if as Walter Benjamin once argued, the factory worker in the modernist age comes to absorb the jolting, jarring repetitive action of the machine, such that those movements are appropriated into the worker's own behaviour, so too people today have absorbed the thinking and fluid circuitry behind the computer screen. New conditions breed new ways of thinking. As Douglas Rushkoff observes, a new computer generation is emerging. The computer kids of today come to behave like their computers. They identify with them, play with them, and mimic their operations. Analogical reasoning is out. Non-linear, multiple-layered thinking is in - Deleuzian surfing. Fractals, rhizomes and clones, fluidity and flux - these are the buzz words of this new generation. In such a context, those who argue against the use of the computer in the contemporary design studio are failing to address the concrete ontological reality of life today, and are doing no service to the students, for whom knowledge of computer has become a 'given' within the contemporary office. It may be that the still prevalent antipathy towards digital technology is merely a form of 'denial'. As in the case of homophobics, who often deny their latent homosexuality, critics of technology may be repressing a secret fascination with technology. An individual 'in denial' may be fascinated by some personal psychic obsession, but, not wishing to acknowledge it, will project that obsession on to some external object, and then criticise it. But whether this antipathy towards digital technology is a form of repressed fascination or not, it is clearly out of place in what has become a highly digitalised world.

This is not to say that the computer should be accepted unproblematically within the studio. Indeed the lessons of those design schools that have accepted the computer wholesale would seem to indicate that the concerns expressed in The Anaesthetics of Architecture about the potential aestheticisation and hence anaesthetisation of social issues are borne out only too clearly in such contexts. Rather it is a call for a self-critical, theoretically informed engagement with such realms. Theory may be unable in itself to combat the potential problems of aestheticisation. Yet it may provide the first crucial step. Once a problem has been exposed, one is no longer trapped by that problem.

The consequences are all too obvious. Not only have we accepted technology as an essential part of our everyday life, such that the distinction once posed between techné and technology seems no longer valid, but our whole existence has become conditioned by technology. In this new digital age, as Sarah Chaplin argues, we have adopted a form of cybervisuality. An important factor, then, is our interface with that technology. For technology may take many forms. Here the question of design becomes crucial. The message of mimesis is not that human beings will adapt to anything, so that design is unimportant, but precisely the opposite. Design becomes an important mechanism for making people feel at one with their world. This relates not simply to whether a piece of technology is itself aesthetically pleasing - as is the case, say, with the iMac computer - , but in the context of digital technology it relates also to the user interface - to software programming and its compatibility with human modes of operation. Far from engendering alienation, well designed technology has the capacity to overcome alienation.

There was a time when Heideggerian thought made a substantial and noteworthy contribution to architectural culture in challenging the spirit of positivism that was once so pervasive. But now Heideggerian thinking must not itself go unchallenged, in that it threatens to install itself as a set of fixed values out of tune with the fluidity and flux of contemporary society. And while some would criticise postmodern thought for being relativistic in accommodating plurality and difference, and questioning the ground on which any particular statement is made, the true relativism lies surely in a tradition that forecloses even the possibility of even asking these questions, by doggedly adhering to an out of date set of values, and by failing to engage substantively with any critical discourse.

In an increasingly digital world, it is time, it would seem, to adopt a more flexible and tolerant attitude towards digital technology. It is time to break free from the shackles of the past. It is time, perhaps, to forget Heidegger.

#### Ontology has no political impact

Srnicek 09 [Nick, Ph.D Candidate in International Relations @ the London School of Economics, “Notes on Ontology and Politics,” http://accursedshare.blogspot.com/2009/01/some-notes-on-ontology-and-politics.html]

It seems to me that one of the most contentious and unremarked upon effects of speculative realism has to do with its attack on a piece of continental dogma – namely the presupposition that ontology is necessarily political. This idea is seen in any number of continental works, from Deleuze’s constructivism, to Derrida’s deconstructions of presence, to the social constructivists, gender and identity theorists, among others. The basic idea being that ontology is always constructed through a political battle, a conflict over what exists. In this regards, the contribution of continental work was to undermine the notion that what exists can be definitively determined in an essential way. The problem was that they went too far with this line of thought and tended (I say tended, because there are almost always exceptions) to deny the independence of ontology from politics. In many cases, ontology even became passé, a mere relic of classical philosophy. These ideas, unsurprisingly, came along necessarily with the general acceptance of correlationism – if we can’t speak or know of anything independent of its manifestation to us, then every thing is necessarily already wrapped up in our political relations. With speculative realism, however, this situation changes. The turn towards objects, towards the absolute, and towards the real as indifferent, all imply that ontology must be independent of politics. We can see this most clearly in Brassier’s work, I believe (although it is implicit in all of them). The relative absence of politics in Nihil Unbound stems partly from the belief that we can study ontology without having to be concerned about its political effects. The results of such a study, as in Brassier’s work, can be rather disconcerting for politics – what if there is no such thing as agency? – but this alone fails to discredit the arguments for such a position. So what does the separation of politics and ontology entail? A few hesitant and suggestive remarks might begin to make clear what precisely is at stake for any speculative realist politics... The separation entails, first of all, that an ontology cannot be validated in terms of its political effects. Part of Badiou’s greatness is undoubtedly to have rejuvenated the concept of the subject, but when judging his ontology, we have to do so while bracketing these political effects. Similarly, when studying the results of neuroscience and their political implications, we must be careful not to reject them simply because they don't accord with our fundamental beliefs about ourselves. If it turns out that we are no more than patterns of neurons firing, this is a reality whose effective truth holds sway regardless of our political desires. (As an aside, I think that such an idea needs to reject Levi's 'Principle of Irreduction', as there are scientific examples of entities being reduced to other entities. The basic argument against such a principle being that we can be mistaken about how the difference an entity makes, makes that difference.) The second effect is that we can no longer construct an ontology in order to achieve some political goal. We may wish to privilege difference as a counter to constricting identity formations, but we cannot justify this privileging with political arguments. Rather, properly philosophical arguments need to be marshaled in support of these ideas. (This raises the important question of whether philosophy can ever be distinguished from politics completely, but the linguistic intermingling of the two need not entail their necessary correlation outside of language.) A third and similar point is that an ontology cannot dictate a political program. Difference may be privileged, for example, but this can be taken in the direction of a capitalist individualism or the direction of undermining traditional power relations - a realist ontology will allow for a multitude of political projects to be spawned from it, without necessarily being liberating or progressive (or constraining or conservative). The fourth effect is a little more radical, I think. This is a renunciation of the tendency among continental theorists to place their political arguments in terms of ontology – I’m thinking here of things like Badiou and the uncounted, Rancière and the people, Deleuze and the minor, etc. The common thread being that the collective agency for political change is always determined in terms of its ontological status – what is inexistent, or uncounted, or unactualized. But political change need not require that something fundamentally new come into being. There can be real political progress made without having to generate ontological novelty. (I’ll also mention too that the faith in the New tends to be another continental political dogma. As though the New was necessarily progressive. While the New may be considered an ontological category, its political content is entirely underdetermined by ontological reasoning.)

#### ENVIRONMENTAL SECURITIZATION KEY TO HUMAN SURVIVAL AND INCENTIVIZE CONSERVATION.

CHALECKI 2K7 [Elizabeth, “environmental security: a case study of climate change”, pacific institute for studies in development, environment and safety, Asst. Professor in the International Studies Program at Boston College<http://www.pacinst.org/reports/environment_and_security/env_security_and_climate_change.pdf>]

The security of individuals, communities, nations, and the entire global community is increasingly jeopardized by unpremeditated, non-military environmental threats. These threats are self-generated: we perpetrate them on ourselves, by fouling our air and water, and overharvesting our land. These threats are not felt equally around the world. Southern countries face severe problems from desertification, while northern industrial countries deal with acid rain, and polar regions see large depositions of persistent organic chemical pollutants. Climate change will cause uneven effects over the entire globe for the next fifty to 100 years, with some countries benefiting and others suffering. Despite these omnipresent connections, environmental issues are still not high on the national security agenda. Those who study environmental problems such as deforestation, loss of biodiversity, and climate change generally don’t see the connection through to its higher-order effects, and those who study security problems such as non-proliferation, terrorism, and civil conflict often don’t recognize the environmental roots and effects of these problems. So why is this such a hard gap to bridge? Thinking in this multidisciplinary way is not traditional for either environmentalists or security specialists, the majority of whom have defined their fields in specific ways. Consequently the nexus of environmental security is seen neither as a security issue nor an environmental issue. However, environmental issues are often security concerns because even without directly causing open conflict, they have the potential to destabilize regimes, displace populations, and lead to state collapse. The environment is the planetary support system on which all other human enterprises depend. If political, social, cultural, religious, and most importantly economic systems are to remain secure and viable, the environment must also remain secure and viable. This makes global environmental conditions a legitimate national security concern for all countries.

### Fiscal Cliff

#### Immigration reform is at the top of the agenda

Raji 11/7

Manu Raji (writer for Politico) November 7, 2012 “Harry Reid agenda: Filibuster crackdown, tax increases” http://www.politico.com/news/stories/1112/83514.html

Once the procedural snafus are resolved, Reid said “very high” on his priority list will be an attempt to pass an immigration overhaul, an issue important to the Latino community that powered Tuesday night’s Democratic wins. But it would certainly start a divisive and emotional debate certain to alienate conservative members of both parties. Reid said he could get 90 percent of his caucus to support such a measure. Republicans, he said, would block immigration reform “at their peril.” “Not for political reasons; because it’s the wrong thing to do to not have comprehensive immigration reform,” Reid said. “The system’s broken and needs to be fixed.”

**No deal – the Tea Party won’t cave**

**Collender 9-26**

Stan is a former staffer on both the House and Senate budget committees, founder of the blog “Capital Gains and Games,” and a partner at Quorvis Communications, where he works with clients in the financial sector, “Boehner May Have to Let the Debt Ceiling Happen to Stay Speaker,”

I've come to the conclusion that House Speaker John **Boehner** (R-OH**) is going to have a** very **difficult time making any deal with** the **Democrats during the lame duck** session on taxes and spending – that is, on preventing the fiscal cliff – **and still remain as speaker** in the next Congress. **That means** that **avoiding the fiscal cliff will be** far **harder than any analysis** of the situation **has dared to conclude**.¶ Yes, this assumes that Republicans will keep the majority in the House next year and, therefore, that the GOP will be picking one of its own as speaker. But just consider what would happen if the following occurs.¶ No matter who wins the presidency and is in the majority in the Senate, the GOP retains control in the House.¶ **Boehner wants to stay as speaker** even if House Republicans lose some seats and their majority gets smaller.¶ **The smaller GOP majority will prompt some to insist** **that Boehner should not be speaker** in the next Congress. (**Given the tea party wing’s distrust of Boehner** since at least the beginning of 2011, it’s not at all clear that there won’t be some effort to unseat him even if the GOP doesn’t lose seats in the 2012 election.)¶ **In other words, Boehner will be on a very short leash** during the lame duck **and will have to continually prove to his tea party wing that he merits its support**. Unless Democrats are willing to do something almost unimaginable and vote for **Boehner**, he **cannot remain as speaker** **without the tea party wing’s votes**.¶ **But Boehner isn’t likely to get tea party support if he shows any willingness to compromise with congressional Democrats or** (perhaps especially) the **Obama** White House **on extending the tax cuts and preventing the military spending portion of the sequester**. This means **there can’t be a quick deal** of any kind on fiscal cliff-related policies **because of the tea party’s mantra that** concluding **a deal** long **before the deadline means** that **you are** probably **leaving something on the table**.¶ It also likely means that **any deal will be very difficult because** of **the tea party** **wing’s other basic tenet that compromise** of any kind (**and especially when it comes to taxes) is a sin**.¶ There will be a GOP caucus meeting during the lame duck at which the Republican candidate for speaker will be chosen and, in theory, that will settle the matter before the fiscal cliff is triggered at midnight January 1. But…and it’s a big but…t**he formal election of the speaker won’t occur until the new Congress convenes** in early **January after all of the fiscal cliff** spending and tax **changes have kicked in**. That will give Boehner watchers and opponents another bite at the apple weeks after the caucus decision. In other words, **Boehner will be on that very short leash into January** and nothing will really be settled before the cliff happens**.¶ Boehner has already shown that he’s more than willing to take positions to accommodate his tea party wing so he can stay as speaker**. For example, **his** fire-and-brimstone **speech in May when he insisted that he would not allow the debt ceiling to be raised** again **unless federal spending was cut** by the same number of dollars the borrowing limit is raised – as basic a tea party position as there is -- was clearly an effort to show that faction of his party that he was one of them and totally worthy of their support. **There’s no reason to think Boehner won’t do that** and more **again.¶ This scenario makes a deal to avert the fiscal cliff far less likely than anyone is assuming**. Indeed, **if the White House doesn’t cave to GOP demands, it almost seems as if Boehner will have to let the fiscal cliff happen to keep his job**. It also seems to indicate that the most likely agreement will be one that stops the cliff from being implemented fully through the year after it has been triggered.¶ There are a number of reasons why this scenario might not play out.¶ For example, a total capitulation to the GOP by the White House might be more likely than it current seems. After all, **the administration did that before when it came to letting the tax cuts expire in 2010**.¶ Or Romney might get elected and the GOP will go with Boehner because it will assume that it will be able to fix what it doesn’t like after the inauguration.¶ Or the tea party wing will realize that not supporting Boehner when the House convenes in January wouldn’t make a great deal of sense because that could mean that the Democratic nominee would get the greatest number of votes and be elected speaker. That might force the tea party wing to have to decide who it dislikes more: Boehner or Nancy Pelosi (D-CA).¶ To avoid this, the GOP caucus would have to make it clear to Boehner before the formal vote that he does not have enough support to be elected and, therefore, should step aside. The question at that point would be whether Boehner would have the testicular fortitude to play extreme political hardball, not withdraw and dare his own party to vote against him.¶ And it’s certainly also possible that after the election Boehner will become a much stronger speaker than he has been over the past two years and figure out a way to get the GOP caucus to go along with a compromise before the fiscal cliff occurs. On the one hand, he succeeded in doing something like that a few weeks ago when he convinced his caucus to vote for the fiscal 2013 continuing resolution with a higher spending level than many in the tea party wing wanted. On the other hand, Boehner was rolled repeatedly over the past two years by the tea party on taxing and spending issues and it may revert back to that previous take-no-prisoners attitude once the election is over.¶ **Bottom line:** **The odds of the fiscal cliff happening are greater than most people are currently willing to admit.**

#### Both sides are hardening positions

Kelley Beaucar Vlahos (writer for Fox News) November 7, 2012 “

Gridlock as usual or new era of compromise? Washington stares down 'fiscal cliff' crisis after election” http://www.foxnews.com/politics/2012/11/07/gridlock-as-usual-or-new-era-compromise-washington-faces-choice-after-election/

Obama and the Democrats have shown interest in letting the so-called Bush tax rates expire for the top earners, while Republicans have not shown an inclination yet for budging on it. Time will tell if there is room for negotiation -- a combination of increased revenue and cuts -- though Obama may hold the upper hand. Still, the ideological lines are firm and with the addition of two fiscal conservatives to the Republican ranks in the Senate -- Ted Cruz from Texas, and Jeff Flake in Arizona -- there might be more of a hardening than Hill watchers think, said David Boaz, senior politics analyst from the Cato Institute. "My gut level instinct would be there are fundamental differences between the Democrats and the Republicans in Congress and the election hasn't moved us any closer to resolving these questions," he said.

**No PC**

**Chicago Tribune 11-1**

“Economic Uncertainty to Linger: Even After Election,”

While action isn't required until the end of December, analysts anticipate that the afterglow of the presidential election will quickly dissipate during the next two months as investors grow anxious about the December deadline and the potential outcome for the economy.¶ "Continued gridlock is a risk," Chadha said. On the other hand, "bipartisan compromise with orderly negotiations would see equities rally."¶ But current political **polls indicate** that **neither candidate will win with a mandate**. So analysts are not anticipating orderly negotiation on tax and spending cuts this year or next.¶ "**A close race or disputed result could reduce the political capital of the winner, diminishing prospects for a compromise solution for the fiscal cliff in the lame-duck session of Congress**," said Citigroup global political analyst Tina Fordham.¶

#### Plan popular in Congress - only 1 vote against it and both parties cosponsor

Pendidikan ‘11

Cinta writes for the Love and Like Education Blog, “Sanders is the Sole Vote Against Small Modular Reactor Research,” <http://loveandlikeeducation.blogspot.com/2011/08/bernie-sanders-and-small-modular.html>

**Sanders is Sole Vote Against Small Modular Reactor Research**¶ Bernie Sanders and Small Modular Reactors¶ Senator Bernie Sanders often speaks about his opposition to Vermont Yankee as having something to do with the age of the plant, the fact it is owned by Entergy, or his "state's rights" stance about regulating nuclear power plants.¶ Recently, however, Sanders made it clear that he is against nuclear power in any form and is proud of that opinion. On Senator Sanders website, he featured the fact that he was the only vote against "a pair of measures that would promote the development of small modular reactors."¶ One of these measures was the Nuclear Power Act S512. **This act would authorize the Secretary of Energy to start a cost-shared program for development o**f small modular reactors **(SMRs).¶ This act had strong bi-partisan support, being sponsored by 3 Republican and 4 Democratic Senators. The act requires research and development funds for SMRs.** The Act is still in process, and does not have a firm dollar amount attached, but the dollar amount is likely to be small (in government terms, at least.). **Current estimates are $100 million per fiscal year** for four years, starting next year.¶ The act also requires that industry cost-share the expense. If industry doesn't think it is worth spending money on the research, the research will not receive government funding either.¶ As a background to the probable cost of this Act, we should note that President Obama requested $4.8 billion dollars for Department of Energy research, of which $3.2 billion is allocated for renewable energy and energy efficiency research. (This number has changed with the debt deal, but new numbers are not available at this time.)¶ Small Modular Reactors for The Future¶ Sander's opposition to this Nuclear Power Act will hurt America's chances to develop an important new exportable technology. Outside of Europe, the nuclear renaissance remains in full swing, with reactors being ordered and built in Arabia, China, India and Southeast Asia. Developing a strong set of SMR designs would be America's best chance to re-entering the world market for nuclear power.¶ SMRs are modular (assembled in a factory and delivered to the site), small (50 to 225 MW) and have many safety features, such as passive cooling. SMRs are expected to have a huge international market. They suitable for many places that do not have the population density or money for the current crop of huge reactors (1200 MW, built on site at great expense). SMRs would make nuclear power affordable and salable many places.¶ Westinghouse and Babcock & Wilcox have invested significant amounts of their own money in developing these products. The NRC is also active in assessing preliminary designs. At another Senate committee meeting on SMRs, Commissioner Magwood of the NRC said that he does not expect decisions made by the NRC to be the critical factor in the success or failure of SMRs. Magwood noted that SMRs have passive safety features and large water inventories; these would be considered during license review.¶ America Fallen Behind¶ America has fallen far behind the rest of the world in most nuclear technologies. Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs) were developed in this country. They are being sold all over the world, but not by United States companies. We're out of the running. Other countries licensed and improved our original technologies. Companies from France, Korea, Russia and China compete to build large reactors in China, Arabia, and Southeast Asia.¶ Three American companies have put millions of dollars into the development of SMRs: Westinghouse, Babcock & Wilcox, and NuScale (a small start-up). Many people in the nuclear industry feel that the race to develop the first successful SMR is a truly high-stakes race, being fought at the level of nationwide efforts. Luckily, SMR development has bi-partisan support, and Mr. Sanders was alone in his opposition to supporting American industry efforts to develop these plants.¶ Should Government Be Involved?¶ Of course, one can make a case that the government should get out of the energy research business altogether. If Senator Sanders wished to save tax dollars by cutting all energy-research programs, he might have a valid case. However, if the government does plan to spend money on energy research, cost-sharing with industry on a new nuclear technology is certainly a far better use of funds than many of the projects in the swollen DOE renewable budget.

**Bipart support for SMR’s in Congress**

**E&E News 9-24**

“DOE Funding for Small Reactors Languishes as Parties Clash on Debt,” <http://www.eenews.net/public/Greenwire/2012/09/24/3>

Some of the nation's largest nuclear power companies are anxious to hear whether they will get a share of a $452 million pot from the Department of Energy for a new breed of reactors that the industry has labeled as a way to lessen the safety risks and construction costs of new nuclear power plants.¶ The grant program for these "small modular reactors," which was announced in January, would mark the official start of a major U.S. foray into the technology even as rising construction costs -- especially when compared to natural-gas-burning plants -- cause many power companies to shy away from nuclear plants.¶ DOE received four bids before the May 21 deadline from veteran reactor designers Westinghouse Electric Co. and Babcock & Wilcox Co., as well as relative newcomers Holtec International Inc. and NuScale Power LLC. Now the summer has ended with no announcement from DOE, even though the agency said it would name the winners two months ago.¶ As the self-imposed deadline passed, companies started hearing murmurs that a decision could come in September, or perhaps at the end of the year. To observers within the industry, it seems that election-year calculations may have sidelined the contest.¶ "The rumors are a'flying," said Paul Genoa, director of policy development at the Nuclear Energy Institute, in an interview last week. "All we can imagine is that this is now caught up in politics, and the campaign has to decide whether these things are good for them to announce, and how**."¶ Small modular reactors do not seem to be lacking in political support. The nuclear lobby** has historically **courted both Democrats and Republicans and** still **sees itself as being in a strong position with key appropriators on both sides of the aisle**.¶ Likewise, **top energy officials in the Obama administration have hailed the promise of the new reactors, and they haven't shown any signs of a change of heart.** DOE spokeswoman Jen Stutsman said last week that the department is still reviewing applications, but she did not say when a decision will be made.¶ "This is an important multiyear research and development effort, and we want to make sure we take the time during the review process to get the decision right," she wrote in an email.¶ That the grants haven't been given out during a taut campaign season, even as President Obama announces agency actions ranging from trade cases to creating new national monuments to make the case for his re-election, may be a sign that the reactors are ensnared in a broader feud over energy spending.¶ Grant recipients would develop reactor designs with an eye toward eventually turning those into pilot projects -- and the loan guarantees that these first-of-a-kind nuclear plants are using today to get financing would be blocked under the "No More Solyndras" bill that passed the House last week (Greenwire, Sept. 14).

**Winners win – passing foreign policy is key.**

**Marshall & Prins 11** Poli Sci Profs, (September 2011, Bryan W. Marshall --- associate professor of political science at Miami University, Brandon C. Prins --- associate professor of political science at the University of Tennessee, Knoxville, Presidential Studies Quarterly, “Power or Posturing? Policy Availability and Congressional Influence on U.S. Presidential Decisions to Use Force”)

Presidents rely heavily on Congress in converting their political capital into real policy success. Policy success not only shapes the reelection prospects of presidents, but it also builds the president’s reputation for political effectiveness and fuels the prospect for subsequent gains in political capital (Light 1982). Moreover, the president’s legislative success in foreign policy is correlated with success on the domestic front. On this point, some have largely disavowed the two-presidencies distinction while others have even argued that foreign policy has become a mere extension of domestic policy (Fleisher et al. 2000; Oldfield and Wildavsky 1989) Presidents implicitly understand that there exists a linkage between their actions in one policy area and their ability to affect another. The use of force is no exception; in promoting and protecting U.S. interests abroad, presidential decisions are made with an eye toward managing political capital at home (Fordham 2002).

**Political capital theory false—can’t influence agenda**

**Dickinson 9**

(Matthew, professor of political science at Middlebury College, May 26, "Sotomayor, Obama and Presidential Power, "http://blogs.middlebury.edu/presidentialpower/2009/05/26/sotamayor-obama-and-presidential-power/)

What is of more interest to me, however, is what her selection reveals about the basis of presidential power.  **Political scientists**, like baseball writers evaluating hitters, **have devised numerous means of measuring a president’s influence in Congress**.  I will devote a separate post to discussing these, but in brief, they often center on the creation of legislative “box scores” designed to measure how many times a president’s preferred piece of legislation, or nominee to the executive branch or the courts, is approved by Congress.  That is, how many pieces of legislation that the president supports actually pass Congress? How often do members of Congress vote with the president’s preferences?  How often is a president’s policy position supported by roll call outcomes?  **These measures**, however, **are a misleading gauge of presidential power – they are a better indicator of congressional power.**  This is because **how members of Congress vote on a nominee or legislative item is rarely influenced by anything a president does**.  Although journalists (and political scientists) often focus on the legislative “endgame” to gauge presidential influence – will the President swing enough votes to get his preferred legislation enacted? – **this mistakes an outcome with actual evidence of presidential influence.  Once we control for other factors – a member of Congress’ ideological and partisan leanings, the political leanings of** her **constituency,** whether she’s up for **reelection** or not – **we can usually predict how she will vote without needing to know much of anything about what the president wants.**  (I am ignoring the importance of a president’s veto power for the moment.) Despite the much publicized and celebrated instances of presidential arm-twisting during the legislative endgame, then, **most legislative outcomes don’t depend on presidential lobbying**.  But this is not to say that presidents lack influence.  Instead, the primary means by which presidents influence what Congress does is through their ability to determine the alternatives from which Congress must choose.  That is, **presidential power is largely an exercise in agenda-setting** – not arm-twisting.   And we see this in the Sotomayer nomination.  Barring a major scandal, she will almost certainly be confirmed to the Supreme Court whether Obama spends the confirmation hearings calling every Senator or instead spends the next few weeks ignoring the Senate debate in order to play Halo III on his Xbox.  That is, how senators decide to vote on Sotomayor will have almost nothing to do with Obama’s lobbying from here on in (or lack thereof).  His real influence has already occurred, in the decision to present Sotomayor as his nominee.

#### Economic decline doesn’t cause shooting wars

Miller 2k

(Morris, economist, adjunct professor in the University of Ottawa’s Faculty of Administration, consultant on international development issues, former Executive Director and Senior Economist at the World Bank, Winter, Interdisciplinary Science Reviews, Vol. 25, Iss. 4, “Poverty as a cause of wars?” p. Proquest)

The question may be reformulated. Do wars spring from a popular reaction to a sudden economic crisis that exacerbates poverty and growing disparities in wealth and incomes? Perhaps one could argue, as some scholars do, that it is some dramatic event or sequence of such events leading to the exacerbation of poverty that, in turn, leads to this deplorable denouement. This exogenous factor might act as a catalyst for a violent reaction on the part of the people or on the part of the political leadership who would then possibly be tempted to seek a diversion by finding or, if need be, fabricating an enemy and setting in train the process leading to war. According to a study undertaken by Minxin Pei and Ariel Adesnik of the Carnegie Endowment for International Peace, there would not appear to be any merit in this hypothesis. After studying ninety-three episodes of economic crisis in twenty-two countries in Latin America and Asia in the years since the Second World War theyconcluded that:19 Much of the conventional wisdom about the political impact of economic crises may be wrong ... The severity of economic crisis - as measured in terms of inflation and negative growth - bore no relationship to the collapse of regimes ... (or, in democratic states, rarely) **to** an outbreak of violence ... In the cases of dictatorships and semidemocracies, the ruling elites responded to crises by increasing repression (thereby using one form of violence to abort another).

#### No impact – their evidence is political posturing

Taylor Marsh October 25, 2012 “Move to Stop Obama s Bad Lame Duck Entitlement Deal has Already Begun” Lexis

It is known in Washington as the fiscal cliff. But policy and economic analysts projecting its complicated and wide-ranging potential impact said the term fiscal hill or fiscal slope might be more apt: the effect would be powerful but gradual, and in some cases, reversible. The slope would likely be relatively modest at first, Chad Stone, the chief economist at the Center on Budget and Policy Priorities, a research group based in Washington, wrote in a recent analysis. A relatively brief implementation of the tax and spending changes required by current law should cause little short-term damage to the economy as a whole. [...] Moreover, while the fiscal cliff would be enormous in annual terms, its effect would be cumulative, not immediate, analysts have noted. Households hit by the tax increases might not notice the $10 or $100 missing from their paychecks, even if it would damp their spending over the course of the year. Agencies hit by the spending cuts might not act immediately. There is absolutely no need to ram through a fiscal cliff deal before January, but that s what you ll hear. It s timed perfectly with the holidays when people are tuning out, after an election that s exhausted everyone. The gaping maw of economic reality, however, revolves around one irrefutable fact. If we get the economy moving the deficit would not give reason for panic. The goal is to stop a deal in the lame duck. The effort has already begun.

#### DOD energy spending isn’t perceived by the public, even though other government spending is

Reitenach 12

Gail Reitenbach 12, Managing Editor, POWER Magazine, Senior Editor at The McGraw-Hill Companies, 1/1/12, “The U.S. Military Gets Smart Grid,” <http://www.powermag.com/print/smart_grid/The-U-S-Military-Gets-Smart-Grid_4228.html>

The military has an almost perfect set of conditions for developing a variety of advanced, "smart" technologies centered on electricity generation, delivery, and use.¶ Necessity. The DOD is one of the largest energy consumers worldwide and the single largest energy consumer in the U.S. At a White House Energy Security Forum in April 2011, Deputy Defense Secretary William J. Lynn III noted that the DOD accounts for 80% of U.S. federal energy use (and somewhere between 1% and 2% of nationwide consumption), consumes more energy than is used by two-thirds of all the nations on Earth, and has annual energy bills in the tens of billions of dollars ($15 billion in 2010). As in the civilian world, the number of electrically powered devices keeps increasing, so demand tends to rise as well. Consequently, ensuring a reliable supply of energy for both transportation and power can be challenging. ¶ Surety of supply poses challenges for both stationary and FOB installations. According to Lynn, more than 70% of convoys in Afghanistan are used to transport fuel or water and are easy targets for insurgents' roadside bombs. More than 3,000 U.S. troops and contractors had been killed or wounded protecting them as of April 2011. ¶ The desire to keep its people safe—by minimizing the amount of fuel that U.S. forces need to move around in combat zones to fuel electricity generators and vehicles—is a powerful motivating factor for many of the military's smart grid, energy efficiency, and renewable energy initiatives. ¶ Sharon E. Burke, assistant secretary of defense for operational energy plans and programs, told the audience at the Military Smart Grids and Microgrids Conference in October 2011: "When you consider that we move about 50 million gallons of fuel every month right now in Afghanistan, much of which is for power generation, you begin to understand the huge financial cost of this fuel." Burke noted that the fuel powers more than 15,000 generators in Afghanistan alone. She added that better combat power generation has benefits that include less need for fuel, reduced noise and heat signatures, less maintenance, and a lighter force. ¶ Protecting defense-related people, projects, and property at home is also a concern. Remember that DOD facilities are, for the most part, connected to the national grid, making them vulnerable to massive outages like those experienced in 2003 in the Northeast and in 2011 in the Southwest. ¶ Money. Though some Americans may balk at the Department of Energy (DOE) issuing grants and loan guarantees to advance utility smart grid or renewable projects, they are much less aware of the money spent through the Pentagon on similar projects for the military. ¶ For example, Dorothy Robyn, DOD deputy undersecretary for installations and environment, told Defense News on Oct. 31, 2011: "I've been delegated the authority to sign off on renewable projects that go out beyond the 10-year authority that most federal agencies have. We're the only federal agency that has the authority to go out to 30 years. What that does is allow us to do projects that are bigger and have a longer payback period." Robyn also noted that her department can take advantage of third-party financing for renewable and energy efficiency projects.

**The plan saves the economy.**

**Baker et al 7**

(*Howard*, Former Member, United States Senate, Former Chief of Staff for President Ronald Reagan, *Senator J. Bennett Johnston*, Johnston & Associates, Former Member, United States Senate, *Ambassador C. Paul Robinson*, Former Director, Sandia National Laboratories, *Scott L. Campbell*, Senior Public Policy Advisor, Baker Donelson Bearman Caldwell & Berkowitz, PC, Former Director, Office of Policy, Planning and Analysis, U.S. Department of Energy, *Susan Eisenhower*, President, The Eisenhower Group, Inc., *Andrew D. Lundquist*, President, Lundquist Nethercutt and Griles, Former Director, National Energy Policy Development Group, *William F. Martin*, Chairman, Washington Policy & Analysis Inc., Former Deputy Secretary of Energy, *Jerry Oliver*, Chairman, Edison Welding Institute's Nuclear Fabrication Consortium, *Bart R. Olson*, Vice President and General Manager, ATK Tactical Propulsion & Controls, *Dr. Jerry Paul*, Dinstinguished Fellow on Energy Policy, Howard H. Baker Jr. Center for Public Policy, University of Tennessee, *Dr. David B. Prior*, Executive Vice President and Provost, Texas A&M University, *Darrel A. Rice*, Partner, Haynes and Boone LLP, *Dr. John I. Sackett*, Former Associate Laboratory Director for Engineering Research, Argonne National Laboratory, *Dr. Thomas L. Sanders*, Vice President/President-Elect, American Nuclear Society, *Dr. Les E. Shephard*, Vice President, Energy and Infrastructure Assurance, Sandia National Laboratories, *Dr. Alvin W. Trivelpiece*, Former Director, Oak Ridge National Laboratory, Former President, Lockheed Martin Energy Research Corporation, *John C. Tuck*, Senior Public Policy Advisor, *Baker Donelson*, Former Under Secretary of Energy, *John K. Welch*, President and Chief Executive Officer, USEC Inc., *An Assessment of the Economic, Employment, Environmental and Energy Security Benefits of New Nuclear Energy Facility Construction in the USA*, Produced by Oxford Economics for the American Council on Global Nuclear Competitiveness, Above Authors are the Council Members, http://www.nuclearcompetitiveness.org/documents.html)

The ongoing nuclear renaissance offers the promise of spurring new nuclear power plant construction in the United States. **New plant construction**, in turn, could stimulate our heavy manufacturing sector and restore United States leadership in global nuclear energy markets. Many billions of dollars in revenue and hundreds of thousands of high-paying jobs could be created in the United States if American firms capture a large share of the growing United States and global nuclear energy markets. This is not just speculation. The initial wave of commercial nuclear power plant construction, which peaked in the 1970s and 1980s, resulted in more than 400 plants being built across the globe. These plants generate about 16 percent of the world’s electricity without emitting air pollutants or greenhouse gases. United States firms dominated this global market. From reactor design to fuel and component fabrication to plant construction and service, United States firms led the way. The United States also dominated the market for enriched uranium, which was supplied by the United States government’s two enrichment plants. Over the past decade or more, the United States nuclear manufacturing infrastructure has been allowed to atrophy. Yet the renewed, global interest in the use of nuclear energy represents an opportunity for American companies to recapture a large share of the world market for nuclear products and services. American workers can benefit from the restoration of high-paying jobs in reactor design and construction, component fabrication, reactor operation and maintenance, and other fields. Resurgence in the construction of nuclear power plants could also have important environmental and national security benefits for the United States. Nuclear power plant operations do not result in carbon emissions, so U.S. greenhouse gas emissions could be reduced substantially by displacing coal and natural gas-fired electricity with nuclear power. Nuclear energy can also contribute to our nation’s effort to reduce oil imports and thus increase our national security. The public debate over the expanded use of nuclear energy has, until now, not included a realistic estimate of these potential economic, environmental and national security benefits. The American Council on Global Nuclear Competitiveness arranged for the economic modeling experts at Oxford Economics to prepare the attached analysis to help quantify the benefits that could accrue if the United States were to engage in a new wave of nuclear energy infrastructure construction. In conducting the evaluation, the market for new nuclear energy products and services was considered in two major segments. The first is for the design, construction and operation of new nuclear power reactors. The next few years could see the construction of several new, large light water reactors in the United States. This is the type of reactor used in most of the world’s nuclear power plants. Plans have already been announced to build more than 30 of these reactors in the U.S. starting in the next ten years. In the analysis, Oxford Economics and the Council have assumed that fifty of these plants will be in operation or under construction by 2030. By about the year 2020, these large light water reactors could be joined by so-called Generation IV reactors such as high-temperature gas-cooled reactors and fast spectrum reactors. Compared with today’s reactors, High Temperature Gas Cooled Reactors (HTGRs) offer a high degree of versatility due to their higher outlet temperatures. Their ability to serve as a high temperature heat source for hydrogen or synthetic fuel production should be appealing to many nations seeking to reduce their reliance on oil imports. In addition, their robust fuel cladding contributes to their excellent safety and security characteristics. Fast spectrum reactors are needed to efficiently use recycled nuclear fuel from today’s reactors and thus capture the full benefits of the coming fuel recycling system. Both HTGRs and fast-spectrum reactors are not yet in widespread commercial use, so a system of suppliers will have to be created to provide the needed materials and components. In the analysis, Oxford Economics and the Council have assumed that 20 HTGRs and 12 fast spectrum reactors will be in operation or under construction by 2030; if Generation IV reactors are not ready for wide-scale deployment in the next two decades, additional advanced light-water reactors could be constructed and would result in essentially the same level of benefits. The second market segment is the design, construction and operation of fuel cycle facilities, particularly those for the enrichment of uranium and for the recycle of used fuel. New fuel cycle facilities will have to be constructed in the United States and abroad to support a wide-spread expansion of nuclear energy. In the analysis, Oxford Economics and the Council have assumed that three nuclear fuel recycling facilities (each with 1200 metrics tons/year of recycle capacity) will be in operation in the U.S. by 2030. The Oxford Economics report draws from several studies and sources to provide an integrated estimate of the economic and employment benefits that could accrue if the United States were to capture large shares of these three market segments. The report is intended to provide estimates that can help inform the public debate over investment incentives, research funding, or other policies that would assist in the restoration of American leadership in the global nuclear energy market. Based on the **studies and sources** cited in the Oxford Economics report, they have estimated that the construction of light-water reactors, high-temperature gas reactors, fast-spectrum reactors and used fuel recycle facilities in the United States could result in the generation of: • More than 75,000 manufacturing jobs; • Upwards of 100,000 construction and operations jobs; • More than 100,000 indirect jobs related to the nuclear power industry; and • Another 150,000 induced jobs in non-nuclear industries throughout the country. All told, the rebirth of a robust nuclear construction dfdsfsdfdsffwerewrweand manufacturing industry in the United States could result in the creation of more than 400,000 jobs. This figure could – and almost certainly would – be even higher as rejuvenated United States firms secured contracts to supply American-made nuclear and products and services across the globe. The construction value alone of these new nuclear facilities would be more than $100 billion. The retail value of the electricity produced by the new reactors would be more than $30 billion ¶ dollars per year. The electricity produced would avoid the emission of 430 million tons (390 million metric tons) of carbon per year by 2030 and would reduce oil imports by $41 billion per year. If **no new nuclear reactors** are constructed in the United States, the United States will not accrue many of these economic benefits. We will also find ourselves increasing our trade deficit and weakening our international nuclear policy and non-proliferation position by allowing other nations to be the predominant nuclear suppliers to the world. A restoration of American leadership in nuclear energy is clearly in the economic interests of our country. We urge our nation’s political, industry, financial, and labor leaders to adapt and support policies and programs that will help ensure America’s nuclear leadership is restored.

**2AC Microgrid CP**

**Only smr’s solve the grid – renewables fail**

**Barton 11**

Charles Barton 11, founder of the Nuclear Green Revolution blog, MA in philosophy, “Future storm damage to the grid may carry unacceptable costs”, April 30, <http://nucleargreen.blogspot.com/2011_04_01_archive.html>

Amory Lovins has long argued that the traditional grid is vulnerable to this sort of damage. Lovins proposed a paradigm shift from centralized to distributed generation and from fossil fuels and nuclear power to renewable based micro-generation. Critics have pointed to flaws in Lovins model. **Renewable generation systems are unreliable and their output varies from locality to locality, as well as from day to day, and hour to hour**. In order to bring greater stability and predictability to the grid, electrical engineers have proposed **expanding the electrical transmission system** with thousands of new miles of transmission cables to be added to bring electricity from high wind and high sunshine areas, to consumers. This **would lead**, if anything, **to greater grid vulnerability to storm damage in a high renewable penetration situation**. Thus Lovins renewables/distributed generation model breaks down in the face of renewables limitations. **Renewables penetration, will increase the distance between electrical generation facilities and customer homes and businesses, increasing the grid vulnerable to large scale damage, rather than enhancing reliability**. Unfortunately Lovins failed to note that **the distributed generation model actually worked much better with small nuclear power plants than with renewable generated electricity**. **Small nuclear plants could be located much closer to customer's homes, decreasing the probability of storm damage to transmission lines**. At the very worst, small NPPs would stop the slide toward increased grid expansion. Small reactors have been proposed as electrical sources for isolated communities that are too remote for grid hookups. If the cost of small reactors can be lowered sufficiently **it might be possible for** many and perhaps even **most communities to unhook from the grid while maintaining a reliable electrical supply**. It is likely that electrical power will play an even more central role in a post-carbon energy era. Increased electrical dependency requires increased electrical reliability, and **grid vulnerabilities limit electrical reliability. Storm damage can disrupt electrical service for** days and even **weeks**. **In a future, electricity dependent economy, grid damage can actually impede storm recovery efforts, making large scale grid damage** semi-**self perpetuating**. Such grid unreliability becomes a threat to public health and safety. Thus grid reliability will be a more pressing future issue, than it has been. **It is clear that renewable energy sources will worsen grid reliability**, Some renewable advocates have suggested that the so called "smart grid" will prevent grid outages. Yet **the grid will never be smart enough to repair its own damaged power lines**. In addition **the "smart grid" will be venerable to hackers**, and would be a handy target to statures. A smart grid would be an easy target for a Stuxnet type virus attack. Not only does the "smart grid" not solve the problem posed by grid vulnerability to storm damage, but **efficiency**, another energy approach thought to be a panacea for electrical supply problems **would be equally useless**. Thus, **decentralized electrical generation through the use of small nuclear power plants offers real potential for increasing electrical reliability, but successful use of renewable electrical generation approaches may worsen rather than improved grid reliability**.

**Microgrids don’t solve - turns off the renewables during outages**

**Sater 11**

(Daniel, Research Fellow at Global Green USA’s Security and Sustainability Office in ¶ Washington, DC in the summer of 2011. He is a graduate student at the Frank Batten School of ¶ Leadership and Public Policy at the University of Virginia. Daniel holds a BA in Foreign Affairs ¶ from UVA and will receive his Master of Public Policy degree in May 2012. “Military Energy Security: Current Efforts and Future Solutions” <http://www.globalgreen.org/docs/publication-185-1.pdf>, SEH)

**Microgrids are not without their drawbacks**. Sim**ilar to the problems with the departing load** ¶ **charge utilities levy on installations that produce renewable energy, many utilities try to restrict** ¶ **the use of renewable energy generation as backup power during a power outage. The utilities’** ¶ **reasoning is that, if there was any electricity in the grid during an outage, their workers would be** ¶ **at risk while repairing any damage**. According to the GAO, four out of five installations it visited.

## 1AR

### T

#### Energy production is every stage of nuclear power

Lorton 12

(Utility Analyst in the Natural Gas Division of the Indiana Office of Utility

Consumer Counselor; BA & MS Economic, ISU, thirty years experience in government and private industry, ) Bradley Deposition Testimony

https://myweb.in.gov/IURC/eds/Modules/Ecms/Cases/Docketed\_Cases/ViewDocument.aspx?DocID=0900b6318018efb3

The Clean Energy Statute defined "nuclear energy production or generating facility" as an energy production or generation facility that:¶ (1) uses a nuclear reactor as its heat source to provide steam to a turbine generator to produce or generate electricity;¶ (2) supplies electricity to Indiana retail customers on July 1, 2011;¶ (3) is dedicated primarily to serving Indiana customers; and¶ (4) is undergoing a comprehensive life cycle management project to enhance the safe and reliable operation of the facility during the period the facility is licensed to operate by the United States Nuclear Regulatory Commission. (lC 8-1-8.8-8.5(a))¶ The Clean Energy Statute includes financial incentives for eligible businesses for clean energy projects, including nuclear energy production. Incentives for eligible businesses with nuclear energy production or generating facilities shall be provided by the Commission:¶ ... in the form of timely recovery of costs incurred in connection with the study, analysis, development, development, siting, design, licensing, permitting, construction, repowering, expansion, life cycle management, operation, or maintenance of the facilities.

### Fiscal Cliff

### AT Turns aff

**Doesn’t turn leadership**

**Dickinson 9-5**

Matthew has a Ph. D in Political Science from Harvard, is a Professor of Political Science and writes for the Economist, “Who will Make the Case for Serious Cuts,” <http://www.economist.com/blogs/democracyinamerica/2012/09/defence-spending?fsrc=gn_ep>

AS I mentioned in last night's live-blog, **if sequestration comes to pass**, Barack **Obama will have to make do with a defence budget** roughly **equivalent** (in real terms) **to** George **Bush's outlay for 2007.** That budget surpasses average annual military spending during the cold war. In other words, **even with sequestration, America will still be in pretty good shape militarily. It will still spend as much as all of the other big militaries combined. It will still hold an immense advantage over China and the rest of Asia,** where the Obama administration is focusing its resources, and Russia, which Mitt Romney thinks is America's greatest foe.

**US emerges stronger from economic crisis**

**Kagan ‘12**

[Robert Kagan is a senior fellow in foreign policy at the Brookings Institution and a columnist for The Washington Post. “Not fade away: the myth of American decline.” http://www.tnr.com/article/politics/magazine/99521/america-world-power-declinism?page=0,0&passthru=ZDkyNzQzZTk3YWY3YzE0OWM5MGRiZmIwNGQwNDBiZmI ETB]

SOME OF THE ARGUMENTS for America’s relative decline these days would be more potent if they had not appeared only in the wake of the financial crisis of 2008. Just as one swallow does not make a spring, one recession, or even a severe **economic crisis, need not mean the** beginning of the **end of a great power. The U**nited **S**tates **suffered** deep and prolonged economic **crises** in the 1890s, the 1930s**, and** the 1970s**. In each case, it rebounded** in the following decade **and** actually **ended up in a stronger position relative to other powers** than before the crisis. The 1910s, the 1940s, and the 1980s were all high points of American global power and influence. Less than a decade ago, most observers spoke not of America’s decline but of its enduring primacy. In 2002, the historian Paul Kennedy, who in the late 1980s had written a much-discussed book on “the rise and fall of the great powers,” America included, declared that never in history had there been such a great “disparity of power” as between the United States and the rest of the world. Ikenberry agreed that “no other great power” had held “such formidable advantages in military, economic, technological, cultural, or political capabilities.... The preeminence of American power” was “unprecedented.” In 2004, the pundit Fareed Zakaria described the United States as enjoying a “comprehensive uni-polarity” unlike anything seen since Rome. But a mere four years later Zakaria was writing about the “post-American world” and “the rise of the rest,” and Kennedy was discoursing again upon the inevitability of American decline. Did the fundamentals of America’s relative power shift so dramatically in just a few short years? The answer is no. Let’s start with the basic indicators. **In economic terms,** and even despite the current years of recession and slow growth, **America’s position** in the world **has not changed. Its share of the world’s GDP has held** remarkably **steady**, not only over the past decade but over the past four decades. In 1969, the United States produced roughly a quarter of the world’s economic output. Today it still produces roughly a quarter, and it remains not only the largest but also the richest economy in the world. People are rightly mesmerized by **the rise of China, India, and other** Asian **nations** whose share of the global economy has been climbing steadily, but this **has** so far **come almost entirely at the expense of Europe and Japan, which have had a declining share of the global economy.**

### AT Warming

#### Too late to solve warming

O'Carroll, 9

Eoin O'Carroll, CSM staff writer, 1/27/2009, " Report calls climate change ‘irreversible’ ," http://features.csmonitor.com/environment/2009/01/27/report-calls-climate-change-irreversible/

Even if all the world’s smokestacks and tailpipes were to suddenly stop spewing CO2, if all the trees everywhere were to be left standing, and if all the remaining coal, oil, and gas were to stay in the ground, the planet would still feel the effects of global warming a millennium from now. That’s the conclusion of a sobering new report published in the Proceedings of the National Academy of Sciences. The study found that, even as atmospheric concentrations of carbon dioxide decline, the oceans, which are slowing down global warming by absorbing heat, will seek equilibrium with the atmosphere by re-releasing it.On the Horizons blog, the Monitor’s Pete Spotts quotes Susan Solomon, a senior researcher with the National Oceanographic and Atmospheric Administration and the lead author of the study: “The same thing that is holding back climate change today will keep it going in the very long term, and that is the oceans.” Combine this with the tendency for carbon dioxide to persist in the atmosphere for centuries, and global warming becomes a juggernaut that will take many, many generations to turn around. “People have imagined that if we stopped emitting carbon dioxide the climate would go back to normal in 100 years, 200 years; that’s not true,” said Ms. Solomon, according to the Associated Press.

### 1AR No Pass

#### No bipart deal now

Leonhardt 11/10/2012

(David, David Leonhardt is the Washington bureau chief of The New York Times. “The Cliff Is a Hard Place to Compromise” <http://www.nytimes.com/2012/11/11/sunday-review/the-cliff-is-a-hard-place-to-compromise.html> - Kurr)

For now, Republicans have signaled some openness to accepting higher taxes. But they and the Democrats remain far apart, on both the overall size and the composition of a tax agreement. (Republicans say they will accept only the closing of loopholes, not the higher rates that would come from the expiration of the Bush tax cuts on upper income.)¶ Given the administration’s repeated failure to win over Republicans in its first term, Obama advisers have been talking for weeks about whether he could stand firm and allow the scheduled changes to take effect on Jan. 1. Doing so might hurt a still-vulnerable economy, by leaving consumers with less money and reducing government spending. The reaction from markets may aggravate the situation.¶ But going over the so-called cliff also has the potential to be less bad than feared. It would be a slow accumulation of economic changes and not entirely unexpected, which is very different from defaulting on the country’s debt payments, as nearly happened during the 2011 debt-ceiling talks. Democrats have begun making this point more loudly, in part to send the message that they are willing to accept the scheduled budget changes if need be.¶ “For the president to have any leverage, he has to make the Republicans believe he is willing to let the tax cuts expire,” said James R. Horney of the Center on Budget and Policy Priorities, which has close ties to the White House and Congressional Democrats. “The only way, I suspect, that he can convince them he is willing to let that happen is to actually let it happen.”¶ Republicans, having absorbed defeat and seen the polls showing that Americans consider their party less willing to compromise than Mr. Obama, may well decide to do so before Jan. 1. House leaders spoke of compromise last week. But betting on an unexpectedly smooth bipartisan deal generally hasn’t been the smart move lately.

### 1AR Plan Popular

#### That outweighs their links

Squassoni ‘12

[Sharon Squassoni serves as director and senior fellow of the Proliferation Prevention Program at CSIS. Prior to joining CSIS, Ms. Squassoni was a senior associate in the Nuclear Nonproliferation Program at the Carnegie Endowment for International Peace. From 2002-2007, Ms. Squassoni advised Congress as a senior specialist in weapons of mass destruction at the Congressional Research Service. “The Future of Nuclear Power in the US.” Federation of American Scientists, February 2012. ETB]

Concerns about contamination of the soil and water by radioactivity lay relatively dormant in recent years because of the strong support of the U.S. government for nuclear power and the portrayal of nuclear energy as “clean, green and secure.” Marketing campaigns by the Nuclear Energy Institute (NEI) portraying nuclear energy as “clean air” energy and by the NEI-funded the Clean and Safe Energy Coalition were likely influential.16 On the whole, opponents of nuclear energy generally have had less money to spend on media campaigns, and their message is less pithy. ey have stressed that nuclear power is not the solution to climate change and that it is dangerous, polluting, unsafe, and expensive. The accident at Fukushima returned safety and waste concerns to headline news. Shortly after the accident, a Gallup poll showed 44 percent of the public in favor (in contrast to 59 percent the previous year) and 47 percent opposing nuclear power.17 Figure 6 below shows the results of a Pew Research Center poll conducted about a week after Fukushima.18

#### Rubber stamp solves the link

**Berger 8-30-11**

“The Long War's Long Tail” J.M. Berger is editor of Intelwire.com and author of Jihad Joe: Americans Who Go to War in the Name of Islam. Foreign Policy. http://www.foreignpolicy.com/articles/2011/08/30/the\_long\_wars\_long\_tail

The American approach, as Gartenstein-Ross describes in unrelenting detail, is defined by extravagance, putting its emphasis on security at all costs -- with cost being the operative word. Because of a combination of missteps, hypervigilance, and political fear, virtually any program, policy, or plan that offers a shred of reassurance to the American public can get funded in this environment, whether it's sci-fi technology for airports or an intelligence community so big that no one knows how many people it employs. This results in vast expenditures for security benefits that are sometimes marginal, sometimes nonexistent.

### 1AR Pol Cap Not Key

#### 8% chance of the internal link

Beckmann and Kumar 11

Matthew N Beckmann and Vimal Kumar 11, Associate Professor of Political Science at UC Irvine, econ prof at the Indian Institute of Tech, “Opportunism in Polarization”, Presidential Studies Quarterly; Sep 2011; 41, 3

The final important piece in our theoretical model—presidents' political capital— also finds support in these analyses, though the results here are less reliable. Presidents operating under the specter of strong economy and high approval ratings get an important, albeit moderate, increase in their chances for prevailing on "key" Senate roll-call votes (b = .10, se = .06, p < .10). Figure 4 displays the substantive implications of these results in the context of polarization, showing that going from the lower third of political capital to the upper third increases presidents' chances for success by 8 percentage points (in a setting like 2008). Thus, political capital's impact does provide an important boost to presidents' success on Capitol Hill, but it is certainly not potent enough to overcome basic congressional realities. Political capital is just strong enough to put a presidential thumb on the congressional scales, which often will not matter, but can in close cases.

# Round 7 v UNLV

## 1AC

#### Same as round 2

## 2AC

### Procurement T

#### 1. We meet- plan creates incentives and secures a market for nuclear energy

#### 2. We meet- paying them is the financial incentive

We meet- decrease costs through econs of scale

#### 3. Counter interpretation- financial incentives are disbursement of public funds or contingent commitments

Webb 93

(lecturer in the Faculty of Law at the University of Ottawa (Kernaghan, “Thumbs, Fingers, and Pushing on String: Legal Accountability in the Use of Federal Financial Incentives”, 31 Alta. L. Rev. 501 (1993) Hein Online)

In this paper, "financial incentives" are taken to mean disbursements 18 of public funds or contingent commitments to individuals and organizations, intended to encourage, support or induce certain behaviours in accordance with express public policy objectives. They take the form of grants, contributions, repayable contributions, loans, loan guarantees and insurance, subsidies, procurement contracts and tax expenditures.19 Needless to say, the ability of government to achieve desired behaviour may vary with the type of incentive in use: up-front disbursements of funds (such as with contributions and procurement contracts) may put government in a better position to dictate the terms upon which assistance is provided than contingent disbursements such as loan guarantees and insurance. In some cases, the incentive aspects of the funding come from the conditions attached to use of the monies.20 In others, the mere existence of a program providing financial assistance for a particular activity (eg. low interest loans for a nuclear power plant, or a pulp mill) may be taken as government approval of that activity, and in that sense, an incentive to encourage that type of activity has been created.21 Given the wide variety of incentive types, it will not be possible in a paper of this length to provide anything more than a cursory discussion of some of the main incentives used.22 And, needless to say, the comments made herein concerning accountability apply to differing degrees depending upon the type of incentive under consideration.¶ By limiting the definition of financial incentives to initiatives where *public funds are either disbursed or contingently committed*, a large number of regulatory programs with incentive *effects* which exist, but in which no money is forthcoming,23 are excluded from direct examination in this paper. Such programs might be referred to as *indirect* incentives. Through elimination of indirect incentives from the scope of discussion, thedefinition of the incentive instrument becomes both more manageable and more particular. Nevertheless, it is possible that much of the approach taken here may be usefully applied to these types of indirect incentives as well.24 Also excluded from discussion here are social assistance programs such as welfare and *ad hoc* industry bailout initiatives because such programs are not designed primarily to *encourage* behaviours in furtherance of specific public policy objectives. In effect, these programs are assistance, but they are not incentives.

#### Ground- it is grounded in the literature and is the only way to intrinsically keep military affs in the topic which are key to beat states counterplans, and it links much harder to disads

#### Predictability- our evidence has a definitive list and an intent to define, and is supported in the literature

#### Limits- only adds procurement affs to their list, but limits out all indirect incentive effects their allows

#### Education- key to talk about different actors use of energy and how energy’s connection to the military, and no aff makes sense where the government is the consumer

#### Reasonability key to prevent a race to the most limiting definition

### Solvency

**SMRs solve waste – uses waste**

**Szondy ‘12**

(David Szondy is a freelance writer based in Monroe, Washington. An award-winning playwright, he has contributed to Charged and iQ magazine and is the author of the website Tales of Future Past. “Feature: Small modular nuclear reactors - the future of energy?” February 16, 2012 accessed online August 22, 2012 at http://www.gizmag.com/small-modular-nuclear-reactors/20860/)

**SMRs** can **help with** proliferation, **nuclear waste and fuel supply issues because,** while **some modular reactors** are based on conventional pressurized water reactors and burn enhanced uranium, others **use less conventional fuels.** **Some**, for example, **can generate power from what is now regarded as "waste", burning depleted uranium and plutonium left over from conventional reactors**. Depleted uranium is basically U-238 from which the fissible U-235 has been consumed. It's also much more abundant in nature than U-235, which has the potential of providing the world with energy for thousands of years. Other reactor designs don't even use uranium. Instead, they use thorium. This fuel is also incredibly abundant, is easy to process for use as fuel and has the added bonus of being utterly useless for making weapons, so it can provide power even to areas where security concerns have been raised.

**SMRs solve inevitable water wars**

**Palley ‘11**

Reese Palley, The London School of Economics, 2011, The Answer: Why Only Inherently Safe, Mini Nuclear Power Plans Can Save Our World, p. 168-71

The third world has long been rent in recent droughts, by the search for water. In subsistence economies, on marginal land, **water is** not a convenience but **a matter of life and death**. As a result small **wars have been fought, rivers diverted, and wells poisoned in what could be a warning of what is to come as industrialized nations begin to face failing water supplies.** Quite aside from the demand for potable water is the dependence of enormous swaths of industry and agriculture on oceans of water used for processing, enabling, and cleaning a thousand processes and products. It is interesting to note that fresh water used in both industry and agriculture is reduced to a nonrenewable resource as agriculture adds salt and industry adds a chemical brew unsuitable for consumption. More than **one billion people in the world already lack access to clean water**, and things are getting worse. Over the next two decades, the average supply of water per person will drop by a third**, condemning millions of people to waterborne diseases and an avoidable premature death**.81 **So the stage is set for water access wars between the first and the third worlds, between neighbors downstream of supply, between big industry and big agriculture, between nations, between population** centers, and ultimately between you and the people who live next door for an already inadequate world water supply that is not being renewed. **As populations inevitably increase, conflicts will intensify**.82 It is only by virtue of the historical accident of the availability of nuclear energy that humankind now has the ability to remove the salt and other pollutants to supply all our water needs. The problem is that **desalination is an intensely local process.** Some localities have available sufficient water from renewable sources to take care of their own needs, but not enough to share with their neighbors, and it **is here that the scale of nuclear energy production must be defined locally.** Large scale 1,000 MWe plants can be used to desalinate water as well as for generating electricity However we cannot build them fast enough to address the problem, and, if built they would face the extremely expensive problem of distributing the water they produce. Better, much better, would be to use small desalinization plants sited locally. Beyond desalination for human use is the need to green some of the increasing desertification of vast areas such as the Sahara. Placing twenty 100 MWe plants a hundred miles apart along the Saharan coast would green the coastal area from the Atlantic Ocean to the Red Sea, a task accomplished more cheaply and quickly than through the use of gigawatt plants.83 This could proceed on multiple tracks wherever deserts are available to be reclaimed. Leonard Orenstein, a researcher in the field of desert reclamation, speculates: If most of the Sahara and Australian outback were planted with fast-growing trees like eucalyptus, the forests could draw down about 8 billion tons of carbon a year—nearly as much as people emit from burning fossil fuels today. As the forests matured, they could continue taking up this much carbon for decades.84 **The use of small, easily transported, easily sited, and walk away safe nuclear reactors dedicated to desalination is the only answer** to the disproportionate distribution of water resources that have distorted human habitation patterns for millennia. Where there existed natural water, such as from rivers, great cities arose and civilizations flourished. Other localities lay barren through the ages. **We now have the power, by means of SMRs profiled to local conditions, not only to attend to existing water shortages but also to smooth out disproportionate water distribution and create green habitation** where historically it has never existed**. The endless wars that have been fought, first over solid bullion gold and then over oily black gold, can now engulf us in the desperate reach for liquid blue gold. We need never fight these wars again as we now have the nuclear power to fulfill the biblical ability to “strike any local rock and have water gush forth.”**

**That solves indo-pak water wars that go nuclear.**

**Zahoor ‘11**

(Musharaf, is researcher at Department of Nuclear Politics, National Defence University, Islamabad, “Water crisis can trigger nuclear war in South Asia,” <http://www.siasat.pk/forum/showthread.php?77008-Water-Crisis-can-Trigger-Nuclear-War-in-South-Asia>, AM)

South Asia is among one of those regions where water needs are growing disproportionately to its availability. The high increase in population besides large-scale cultivation has turned South Asia into a water scarce region. The two nuclear neighbors **Pakistan and India share the waters of Indus Basin.** All the major rivers stem from the Himalyan region and pass through Kashmir down to the planes of Punjab and Sindh empty into Arabic ocean. **It is pertinent that the strategic importance of Kashmir, a source of all major rivers, for Pakistan and symbolic importance of Kashmir for India are maximum list positions.** Both the countries have fought two major wars in 1948, 1965 and a limited war in Kargil specifically on the Kashmir dispute. Among other issues, the newly born states fell into water sharing dispute right after their partition. Initially under an agreed formula, Pakistan paid for the river waters to India, which is an upper riparian state. After a decade long negotiations, both the states signed Indus Water Treaty in 1960. Under the treaty, India was given an exclusive right of three eastern rivers Sutlej, Bias and Ravi while Pakistan was given the right of three Western Rivers, Indus, Chenab and Jhelum. The tributaries of these rivers are also considered their part under the treaty. It was assumed that the treaty had permanently resolved the water issue, which proved a nightmare in the latter course. India by exploiting the provisions of IWT started wanton construction of dams on Pakistani rivers thus scaling down the water availability to Pakistan (a lower riparian state). The treaty only allows run of the river hydropower projects and does not permit to construct such water reservoirs on Pakistani rivers, which may affect the water flow to the low lying areas. According to the statistics of Hydel power Development Corporation of Indian Occupied Kashmir, India has a plan to construct 310 small, medium and large dams in the territory. India has already started work on 62 dams in the first phase. The cumulative dead and live storage of these dams will be so great that India can easily manipulate the water of Pakistani rivers. India has set up a department called the Chenab Valley Power Projects to construct power plants on the Chenab River in occupied Kashmir. India is also constructing three major hydro-power projects on Indus River which include Nimoo Bazgo power project, Dumkhar project and Chutak project. On the other hand, it has started Kishan Ganga hydropower project by diverting the waters of Neelum River, a tributary of the Jhelum, in sheer violation of the IWT. **The gratuitous construction of dams by India** has **created serious water shortages in Pakistan.** The construction of Kishan Ganga dam will turn the Neelum valley, which is located in Azad Kashmir into a barren land. **The water shortage will not only affect the cultivation but it has serious social, political and economic ramifications for Pakistan.** The farmer associations have already started protests in Southern Punjab and Sindh against the non-availability of water. These protests are so far limited and under control. The reports of international organizations suggest that the water availability in Pakistan will reduce further in the coming years. If the situation remains unchanged, **the violent mobs of villagers across the country will be a major law and order challenge** for the government. The water shortage has also created mistrust among the federative units, which is evident from the fact that the President and the Prime Minister had to intervene for convincing Sindh and Punjab provinces on water sharing formula. The Indus River System Authority (IRSA) is responsible for distribution of water among the provinces but in the current situation it has also lost its credibility. The provinces often accuse each other of water theft. In the given circumstances, Pakistan desperately wants to talk on water issue with India. The meetings between Indus Water Commissioners of Pakistan and India have so far yielded no tangible results. The recent meeting in Lahore has also ended without concrete results. India is continuously using delaying tactics to under pressure Pakistan. The Indus Water Commissioners are supposed to resolve the issues bilaterally through talks. The success of their meetings can be measured from the fact that Pakistan has to knock at international court of arbitration for the settlement of Kishan Ganga hydropower project. The recently held foreign minister level **talks** between both the countries ended inconclusively in Islamabad, **which only resulted in heightening** the mistrust and **suspicions.** The **water stress** in Pakistan is increasing day by day. The construction of dams will not only cause damage to the agriculture sector but India can manipulate the river water to create inundations in Pakistan. The rivers in Pakistan are also vital for defense during wartime. The control over the water will provide an edge to India during war with Pakistan. The **failure of diplomacy**, manipulation of IWT provisions by India and growing water scarcity in Pakistan and its social, political and economic repercussions for the country **can lead** both the countries **to**ward a **war.** The existent **A-symmetry between** the **conventional forces** of both the countries **will compel the weaker side to use nuclear weapons** to prevent the opponent from taking any advantage of the situation. Pakistan's nuclear programme is aimed at to create minimum credible deterrence. India has a declared nuclear doctrine which intends to retaliate massively in case of first strike by its' enemy. In 2003, India expanded the operational parameters for its nuclear doctrine. Under the new parameters, it will not only use nuclear weapons against a nuclear strike but will also use nuclear weapons against a nuclear strike on Indian forces anywhere. Pakistan has a draft nuclear doctrine, which consists on the statements of high ups. Describing the nuclear thresh-hold in January 2002, General Khalid Kidwai, the head of Pakistan's Strategic Plans Division, in an interview to Landau Network, said that Pakistan will use nuclear weapons in case India occupies large parts of its territory, economic strangling by India, political disruption and if India destroys Pakistan's forces. The **analysis of** the ambitious **nuclear doctrines** of boththe countries clearly **points out** that **any military confrontation** in the region **can result in a nuclear catastrophe. The rivers flowing from Kashmir are Pakistan's lifeline, which are essential for the livelihood of 170 million people of the country and the cohesion of federative units. The failure of dialogue will leave no option but to achieve the ends through military means.**

### Renewable Trade-off

**Renewable investment declining now**

**Yahoo Finance 10/11**/12

 <http://finance.yahoo.com/news/investment-renewable-energy-projects-declining-122000388.html> ETB

Recent **data** from Bloomberg New Energy Finance (BNEF) has **show**ed that **investment in clean energy projects may fall** for the first time in eight years **as the industry continues to struggle with excess capacity.** **The** PowerShares Wilderhill **Clean Energy Portfolio** (PBW) -- which is designed to deliver capital appreciation through the selection of companies that focus on greener and generally renewable sources of energy and technologies that facilitate cleaner energy **-- has fallen over 20 percent year-to-date**. The Paragon Report examines investing opportunities in the Renewable Energy Industry and provides equity research on Broadwind Energy Inc. ( NASDAQ : BWEN ) and Capstone Turbine Corporation ( NASDAQ : CPST ). According to BNEF **investment in renewable** **energy** during the third quarter **fell by 20 percent**, when compared to a year ago, **led by a decline in wind farm financing**. Investment by the U.S. in the third quarter totaled $7.3 billion, a 28 percent sequential decline, and a 62 percent decline year-over-year.

"The location of some of the biggest projects financed in quarter three this year highlight the **geographical shift that is taking place** in clean energy, **with** established markets such as **the U.**S., Europe and China **losing momentum while newer markets** in South America, Asia and Africa **pick up steam**," said Michael Liebreich, CEO of New Energy Finance.

**Plan displaces fossil fuels**

**Loudermilk ‘11**

(Micah J. Loudermilk is a Research Associate for the Energy & Environmental Security Policy program with the Institute for National Strategic Studies at National Defense University, May 31, 2011, “Small Nuclear Reactors and US Energy Security: Concepts, Capabilities, and Costs,” Journal of Energy Security, <http://www.ensec.org/index.php?option=com_content&view=article&id=314:small-nuclear-reactors-and-us-energy-security-concepts-capabilities-and-costs&catid=116:content0411&Itemid=375>)

Pursuing a carbon-free world Realistically speaking, **a world without nuclear** power **is** not **a world** full **of increased** renewable usage, but rather, of **fossil fuels** instead. The 2007 Japanese Kashiwazaki-Kariwa nuclear outage is an excellent example of this, as is Germany’s post-Fukushima decision to shutter its nuclear plants, which, despite immense development of renewable options, will result in a heavier reliance on coal-based power as its reactors are retired, leading to a 4% increase in annual carbon emissions. **On the global level,** **without nuclear power, carbon dioxide emissions** from electricity generation **would rise** nearly **20%** from nine to eleven billion tons per year. When examined in conjunction with the fact that an estimated 300,000 people per year die as a result of energy-based pollutants, the appeal of nuclear power expansion grows further.¶ As the world copes simultaneously with burgeoning power demand and the need for clean energy, nuclear power remains the one consistently viable option on the table. With this in mind, **it becomes** even more **imperative to make nuclear energy** as safe as possible, as **quickly** as possible—a capacity **which SMRs can fill** with their high degree of safety and security. Additionally, due to their modular nature, SMRs can be quickly constructed and deployed widely. While this is not to say that small reactors should supplant large ones, the US would benefit from diversification and expansion of the nation’s nuclear energy portfolio.

**Nuke war leads to extinction and destroys the environment**

**Krieger 4/30/12**

(David, holds MA and Ph.D. degrees in ¶ political science from the University of Hawaii as well as a J.D. from the Santa Barbara ¶ College of Law, Assistant professor at University of Hawaii, founder of the Nuclear Age Peace Foundation and has served as its ¶ president since 1982. He is a councilor on the World Future Council, chair of the Executive ¶ Committee of the International Network of Engineers and Scientists for Global Responsibility, ¶ and a member of the Executive Committee of the Middle Powers Initiative. “NUCLEAR WEAPONS¶ AND A¶ SUSTAINABLE FUTURE” Nuclear Peace Foundation, <http://www.wagingpeace.org/menu/resources/publications/2012_prepcom.pdf>, SEH)

**Nuclear war would preclude a sustainable future. It would destroy the global environment, leading to ¶ the extinction of many forms of plant and animal life. Complex forms of life, such as humans, would be ¶ particularly at risk. A nuclear war fought with existing nuclear arsenals could leave the Earth ¶ uninhabitable for humans**. ¶ Leading atmospheric scientists, who warn of the utterly catastrophic effects nuclear war would have ¶ upon global climate and the environment, argue, “The combination of nuclear proliferation, political ¶ instability and urban demographics may constitute one of the greatest dangers to the stability of society ¶ since the dawn of humans. Only abolition of nuclear weapons will prevent a potential nightmare.”¶ 23¶ The ¶ scientists call for immediate reductions in US and Russian arsenals to a few hundred nuclear weapons to ¶ “reduce the possibility of nuclear winter and encourage the rest of the world to continue to work toward ¶ the goal of elimination.”¶ 24¶ ¶ It is necessary to ensure that nuclear weapons will not be used again as instruments of war, risking the ¶ destruction of civilization, nuclear famine and the extinction of most or all humans and other forms of ¶ complex life. Exposing the dangers of launch-on-warning nuclear policies and the dysfunctional and ¶ counterproductive nature of nuclear deterrence theory is essential for awakening policy makers and the ¶ public to the imperative goal of achieving a world free of nuclear weapons. It is a goal that demands ¶ boldness by all who seek a sustainable future for humanity and the planet. The non-nuclear weapon states ¶ that are parties to the Non-Proliferation Treaty have both the right and the responsibility to assert ¶ leadership in assuring that the nuclear weapon states fulfill their obligations for good faith negotiations ¶ for complete nuclear disarmament.

**Renewables fail—rising demand makes them untenable**

**Shellenberger and Nordhouse ‘11**

(co-founders of American Environics and the Breakthrough Institute a think tank that works on energy and climate change Michael and Ted, Fukushima boosts green case for nuclear, 5/10/11, FT news)

Many of these claims were wildly inaccurate, but they had their intended result. Green campaigners fell back in line. Fukushima showed that, for most environmentalists, **nuclear’s low-probability risks trump** both the **existential threat of climate change** **and** 2m **deaths** annually **from air pollution**. Green campaigners have, ironically, fallen prey to the same misperception of risk they all too often see in a public indifferent to global warming: an obsession with dramatic but infrequent threats, while ignoring those that are banal but far more deadly.¶ Many greens dismiss this criticism by claiming that the choice between nuclear and fossil fuels is false. But in this, environmental hysteria about nuclear power is matched by green delusions about renewable energy. Since at least the 1970s, greens have argued that wind and solar, when combined with energy efficiency, could meet our energy needs without resort to nuclear power or fossil fuels. Faith in what is called the “soft energy path” has taken on an almost religious quality among green activists. Yet, **despite decades of subsidies, solar** **and wind still make up a tiny percentage of energy** virtually everywhere in the world.¶ Anyone who thinks turning away from nuclear will lead to more renewables need only look at what has happened in Germany. **After** Fukushima, it **shut down** seven of its 17 **nuclear plants**. **The result has been that emissions have risen** as much as **10 per cent**, according to Reuters, partly due to electricity imports from coal-burning nations such as the Czech Republic.¶ Germany promises that more of its future electricity will come from renewables, but if it shuts down its entire nuclear fleet the replacement power will come primarily from coal and gas. Indeed, while greens have fawned over its much-vaunted solar subsidies programme, Germany has actually been on a coal building boom, bringing 11 gigawatts of coal-fired generation online – six times the electricity it gets from solar – in the past 10 years alone.¶ Put simply, **there is no credible path to stabilising**, much less reducing, **global carbon emissions without more nuclear power**. We are a planet of 6bn people, heading toward 9bn. Even with better energy efficiency, global energy demand will soon double, perhaps triple. Without nuclear power, the vast majority of that demand will be met by fossil energy.¶ We must take seriously the risks of nuclear power: Fukushima was a serious industrial accident and we must modernise the existing nuclear fleet to account for its failure. More nuclear power will also require better and cheaper nuclear technologies, capable of displacing existing coal and gas power. We should not give up on renewables either: expanding state support for clean-energy innovation, nuclear and non-nuclear alike, must be a priority if we are to wean the world off fossil fuels and meet a dramatically rising global energy demand in the coming decades.

**No impact and long timeframe**

**Mendelsohn 9**,

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

The heart of the **debate about climate change comes from** a number of **warnings** from scientists and others that give the impression **that** human induced **climate change is an immediate threat to society** (IPCC 2007a,b; Stern 2006.) Millions of people might be vulnerable to health effects (IPCC 2007b) crop production might fall in the low latitudes (IPCC 2007b), water supplies might dwindle (IPCC 2007b), precipitation might fall in arid regions (IPCC 2007b), extreme events will grow exponentially (Stern 2006), and between 20-30 percent of species will risk extinction (IPCC 2007b). Even worse, there may be catastrophic events such as the melting of Greenland or Antarctic ice sheets causing severe sea level rise, which would inundate hundreds of millions of people. (Dasgupta et al. 2009) Proponents argue there is no time to waste. Unless greenhouse gases are cut dramatically today, economic growth and wellbeing may be at risk (Stern 2006). **These statements are** largely **alarmist and misleading**. Although climate change is a serious problem that deserves attention, **society’s immediate behavior has an extremely low probability of leading to catastrophic consequences**. The science and economics of climate change is quite clear **that emissions over the next few decades will lead to only mild consequences**. **The severe impacts** predicted **by alarmists require a century** (or two in the Case of Stern 2006) **of no mitigation**. Many of the predicted impacts assume there will be no **or little adaptation. the net** economic **impacts** from climate change over the next 50 years **will take more than a century or even a millennium to unfold** **and** many of these “potential” impacts will never occur because **people will adapt**. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long‐range climate risks. What is needed

**6 degree warming’s inevitable**

**AP 9**

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

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

### 2AC F-35 Tradeoff

#### F-35s are being cut and they fail

Shalal-Esa 12

Andrea Shalal-Esa¶ WASHINGTON | Mon Sep 10, 2012 “More problems raised at Pentagon F-35 fighter review” http://www.reuters.com/article/2012/09/11/us-lockheed-fighter-idUSBRE88A04A20120911

Senior Pentagon officials voiced frustration about the pace of Lockheed Martin Corp's development of the $396 billion F-35 Joint Strike Fighter program at a high-level review on Friday, according to several sources familiar with the program.¶ Officials did not approve a comprehensive plan for operational testing of the F-35 program as had been expected.¶ The Pentagon's Defense Acquisition Board huddled for more than four hours on Friday evening in a meeting described by one participant as "very painful" given ongoing challenges facing the high-tech F-35 helmet that is integral to the craft's weapons systems, and other aspects of the huge program.¶ Marine Corps Commandant General James Amos told Reuters in an interview on Saturday that he had not yet been briefed on Friday's meeting, but was closely following work on the helmet, since its completion was needed soon to allow the Marines to become the first service to use the new jets operationally.¶ "The helmet is a critical piece that needs to be solved," Amos said, noting that the Marines urgently needed the short takeoff, vertical landing (STOVL) version of the plane to replace their aging fighter jets, which include older model F/A-18 Hornets built by Boeing Co..¶ The Marine Corps initially hoped to start using the new F-35B jets this year, but a series of program restructurings has pushed that date back several years.¶ If the helmet being developed by Vision Systems International (VSI), a joint venture between Israel's Elbit Imaging and Rockwell Collins succeeds, it will be the most advanced ever built.¶ It is supposed to let pilots see data from all the plane's sensors, effectively allowing the pilot to look right through the floor of the plane and all around it. But the project has run into problems with night vision, delays in displaying data, jitter under certain conditions, and more recently, a green glow at the visor's edges and problems with alignment.

**The plan saves money - it trades-off with fossil fuel cost**

**Causbie and Hart ’12**

(Lieutenant Colonel Steven Hart, Cadet Hanson Causbie, West Point, New York, United States Military Academy, “Deployable Nukes: The Future Of Nuclear Power In The Deployed Environment”, March 13, 2012, LEQ)

Ten years of operating in the deployed environment have brought to light a number of challenges faced by the United States Army. Over the course of the past decade we have developed our counterinsurgency and stability strategy operations, refined the training of our troops in a variety of fields, and fielded new equipment to help us fight and win in our current operations. Overall, we have adapted to our new environment well and created a fighting force more capable, lethal, and agile than perhaps ever before. Unfortunately, **the advancement of our technology and strategy has not extended to that of infrastructure development, particularly power production**. **Power production and the fuel necessary for the process are a vital element of stability operations and the sustainment of troops in the deployed environment.** **The equipment needed to support power production, usually diesel generators, are costly and require constant time and attention to keep them operational**. **These generators are also heavy polluters, releasing carbon dioxide as well as other byproducts from burning diesel fuel**. Additionally, **thousands of gallons of fuel are required to power these generators**. **This fuel is often difficult to transport as well as dangerous especially in the regions where U.S. troops currently operate**. **A new source of power production is necessary to replace the military’s currently dirty and costly system and provide our service members with** the clean, reliable, and safe **power they need to fight and win our nation’s wars.** **Luckily, this power source has already existed for a number of years.** **Since its introduction in the 1960s nuclear power has continued to grow and advance at an exponential rate. The nuclear power of today is far beyond where it was even ten years ago**. Clean, safe, and easy to maintain, **nuclear power facilities also provide a substantial amount of power with a relatively small amount of waste compared to that of coal, natural gas, and diesel generators.** **With new and self- contained units now on the market nuclear power is able to be provided to almost any region in the world at a reasonable cost and with few safety risks.** **This new nuclear technology is also an excellent fit for deployed environment because of its self-contained operation, low fuel intake, high power output, and clean operation.** This paper will assess the feasibility and practicality of small nuclear power plants for use by the United States Army in the deployed environment as an alternative to other methods of power production. Through the data presented it can be seen that **the deployment of small nuclear power facilities could save the Army millions of dollars annually while substantially cutting fuel requirements**. Additionally, **the Army would cut its environmental waste production and leave its allied partners with a sustainable energy source which could be used for up to a decade.** This paper is broken into four sections. First, the paper will present some statistics on the current power production methods in the deployed environment and data regarding fuel consumption. Next the paper will examine available nuclear technology and the benefits as well associated risks with this equipment in addition to the costs of this equipment. Third, the two methods of power production will be compared with the advantages and disadvantages of both discussed in detail. Finally, the study will close with conclusions on both power sources as well as the future of power production in the deployed environment. CURRENT POWER REQUIREMENTS AND PRODUCTION The current operational environment has completely changed the power requirements for deployed troops. In World War II, for example, a soldier consumed an average of one gallon of fuel a day. In Iraq and Afghanistan the average soldier now consumes twenty gallons of fuel daily.1 Such an increase has resulted in the Marine Corps tripling its use of energy in the deployed environment in the past ten years.2 The training, deployment, and support of military forces in the field now consume 75% of the energy used by the Department of Defense.3 In Afghanistan approximately 30% of operational fuel is used to supply power to forward deployed bases.4 **70% of the logistics operations in Afghanistan and Iraq are devoted to fuel and water, a staggering amount of time and effort for only two of the thousands of resources the military must supply to its service members.5** In 2008 the Department of Defense was supplying 68 million gallons of fuel to OIF and OEF per month, or roughly 2 million gallons of fuel daily.6 In 2010, the Department of Defense spent $15 billion on fuel.7 The consumption of fuel for power is only one element of the power production process. **For fuel to be consumed it must first be transported to the site requiring power. This is oftentimes one of the most dangerous jobs in the deployed environment.** **In Afghanistan 80% of convoys are dedicated to the transport of fuel.8 These** convoys are extremely deadly, responsible for an average of one soldier killed or injured for every 24 convoys.9 **Convoys have become such a danger that Marine Corps Major General Richard Zilmer sent the Pentagon a “Priority 1” request for renewable energy in order to bring awareness of the issue to higher**. In 2011, the Pentagon published its first ever energy plan to address the burgeoning need for power on the battlefield. In the report the Pentagon spoke extensively about reducing the military’s energy footprint through the use of non-oil energy sources.10 The report concluded that reduction in oil usage must be reduced not only to shrink the logistical footprint of deployed troops but also because of the possible “disruption of oil supplies” in the near future.11 Size and Demands Base camps vary in size and the scope of the number of troops they must support. From platoon- sized Combat Outposts (COP) to a Forward Operating Base (FOB) of 25,000 soldiers and contractors COPs and FOBs have differing power demands depending on their mission and the equipment and troops they support. According to ATP 3-37.10, the Army’s guide to building base camps, base camps are built in four sizes. The smallest base camps are built for 50 to 299 people and are no larger than 150 by 250 meters.12 The largest base camps are for a population of 6,000 or greater with the dimensions determined by the individual planners.13 This study will focus on the latter category to include base camps of the “megabase” variety supporting up to 30,000 soldiers and contractors. This size of base camp would be the easiest to institute changes in the power infrastructure because of the massive amount of required and would also be the easiest to emplace nuclear power production facilities. The type and scope of power production also depends on the size of the base camp. At the smallest COPs there may be no source of power expect for batteries for radios and other equipment. Conversely, at Balad Air Base in Iraq the Air Force powered the base with a “generator farm” containing a number of 40 foot MILVANs holding 12 cylinder diesel generators.14 At Camp Leatherneck in Afghanistan the five megawatts of power is supplied by 196 generators consuming 15,431 gallons of fuel daily.15 On smaller FOBs and COPs power is obviously produced on a much more austere scale than the megabases of Balad and Leatherneck. Many of the generators used on larger base camps are Mobile Electric Power (MEP) units.16 One of the most common of the MEP units is the 750 KW MEP 012A Prime Power Units. These generators are powered by Cummins turbocharged twelve cylinder engines and weigh 25,000 pounds. On average these units consume 55 gallons of diesel fuel per hour.17 Many of these 012A generators are gradually being replaced by Deployable Power Generator and Distribution Systems (DPGDS) which are 25% lighter and 15% more fuel efficient than their 012A predecessors.18 82% of the generators in the deployed environment are Tactical Quiet Generators (TQG).19 These generators are available in six major models and range in size from medium suitcases to full-size tractor trailers.20 Power output for these generators ranges from as little as 3 kW to as much as 100 kW.21 These generators are usually used during early stages of a campaign or at smaller FOBs and COPs where transportation of larger generators is difficult or impossible. Varying estimates exist for the amount of power required for a large FOB and the assets which reside at the base. FOBs which support aviation assets require far more fuel than those supporting solely ground assets. One senior military official estimated that the average Army brigade (3,500 to 4,000 soldiers) requires 10,000 gallons of fuel daily or 2.5-2.8 gallons of fuel per soldier per day.22 Fuel costs range from $6.35 per gallon to as much as $45.00 per gallon for FOBs and COPs located on the “tactical edge,” or locations far from combat infrastructure and deep in enemy territory. These prices include transport and fees for the fuel required by contractors.23 Some of this fuel, however, is necessary for vehicles which are not powered by generators. Therefore, power requirements per soldier often give a more accurate picture of fuel requirements for FOBs. ATP 3.37.10 calls for anywhere from 1.5 to 3.5 KW required for each individual on a FOB.24 Approximated Power Costs A series of calculations are necessary for an accurate idea of the power and fuel requirements and the respective cost for a FOB of 25,000 soldiers and contractors. Using an average of 2 KW required per individual a FOB of 25,000 requires 50,000 KW or 500 MW of power. Assuming that the FOB is powered by the new DPGDS, consuming 47 gallons of fuel per hour at 750 KW, the base would require a minimum of 67 generators burning 3,149 gallons of fuel per hour. At a standardized price of $10.00 a gallon the cost per hour of generation is $31,490 or $755,760 per day. These calculations have been greatly simplified with a number of additional factors which must be taken into consideration. First, a number of power generation sources may be employed at a megabase described in this experiment. The construction of a more permanent power plant may decrease costs while the use of older, less efficient generator may increase fuel consumption and thus costs. Similarly, the fluctuation of fuel costs also changes the overall costs as does the fluctuation of contractor costs and contracts. Finally, this estimate does not include estimates on maintenance as well as the cost for additional generators. Many of the generators used on FOBs run at no more than 30% capacity because of maintenance issues. FOBs are also required to have more generators in case of maintenance issues or a sudden surge in power requirements.25 NUCLEAR POWER PRODUCTION AND REQUIREMENTS As can be seen in the preceding section power production through the use of generators can often be inefficient, expensive, and plagued with maintenance issues. This section will discuss the available nuclear technology for the deployed environment as well as the costs associated with this technology. Available Technology A number of nuclear reactor designs are available at varying costs and power outputs. Many of these designs are currently only available on paper while others have entered the initial stages of production. All of the designs, however, share common features which make them appropriate to the deployed environment. The first feature is their size. Reactors range in size from as small as a residential hot tub to as large as a van. This compactness allows these units to achieve specific fabrication and performance goals not found in large light water reactors. 26 Second is the self- containment of these units. Most of the current designs are simply installed in the required location and then left alone with the only maintenance required at the time of removal or refuel.27 Finally, these mini reactors are significantly safer than the prior generations of nuclear technology. Current reactors, known as Generation IV reactors, have fewer moving parts and fewer systems, thus decreasing the points of failure and thus danger of the units.28 Illustration 1 (see below) outlines a few of available nuclear power units available on today’s market. All of these units are self-contained and differ in the length of their service as well as their power output. Name Manufacturer Generating Capacity Fueling Cycle Transportable Gen4 Module (formerly Hyperion Power Module) Gen4 Energy (formerly Hyperion Power Generation) 25 (MW), scalable 8-10 years, returned to factory for refueling and waste removal Ship, rail, or truck NuScale NuScale 45 MW, scalable 2 years, on-site refueling and spent fuel cooling Ship, rail, or truck mPower The Babcock and Wilcox Company 125 MW, scalable 4.5 years, on-site refueling and waste storage Ship or rail Illustration 1: Nuclear Power Reactor Designs29 All of the units above are manufactured and then transported in their entirety to their on-site locations.30 Some of the larger units may require to be sent in components because of their size. Even though the units are self-contained they do require additional infrastructure to distribute power including but not limited to cooling towers and condensers, a steam turbine, and additional support services. Associated Costs Even though all of the above products are capable of operating in the deployed environment the Gen4 Module will be used as the example unit for a number of reasons. First, the Gen4 Module is the smallest and most transportable unit, thus making it an easier unit to integrate into FOBs and begin the transition to nuclear power. Second, the Gen4 Module is the closest to development with delivery of the first units by June of 2013.31 Finally, the Gen4 Module has some important technological advances over its counterparts which make it even more appropriate for the deployed environment. These characteristics will be discussed in detail below. The Gen4 Module is 1.5 meters wide by 2.5 meters high and is a completely self-contained unit with each reactor stocked with ten years of uranium.32 The entire unit, including fuel, weighs approximately 20 tons and requires movement by a heavy haul truck.33 The unit fits into many standard shipping containers as well, making air or water travel fairly straightforward.34 After ten years, or when the uranium has reached 15% uranium enrichment, the reactor module is replaced with a new module within the plant and the old module is shipped back to the manufacturing facility for disposal. The plant can continually produce 25 MW of power for entire ten year life of the reactor core. 35 Each unit is scheduled to cost between $25 million and $30 million dollars.36 Construction on-site will be limited to the reactor vault, water support systems, and connection of the plant to the current power infrastructure.37 Illustration 2 offers a glimpse of the dimensions and design of the unit. Illustration 2: Gen4 Energy Module38 As opposed to other light water reactor designs, the primary cooling system of the Gen4 module is not water. Instead, the reactor is cooled using a lead and bismuth composite, known as LBE. This alloy is non-reactive to air and water and has an exit temperature of 500C, thus making it much safer than water because of its higher boiling point. This makes the reactor much less susceptible to overheating.39 Additionally, such a reactor requires far less water than a traditional reactor with the only water being that in the secondary cooling loop which is self-contained within the power plant.40 Therefore, instead of the need to draw water from an exterior water source the Gen4 Module can operate on approximately 10,000 gallons of water per hour.41 This would require approximately 20,000 gallons of water to be in the system at all times.42 Assuming each unit to cost $30 million, a FOB of 25,000 personnel would require a minimum of twenty of these units to meet power demands for a total of $600 million for ten years of power production. Therefore, the total cost per day comes to approximately $164,384.00. It is important to note that this cost does not include the cost of vault construction, transport of the unit to site, or construction of the cooling system and necessary water required for the cooling of the reactor. The final construction of the power plant to support the Gen4 Module can be seen in Illustration 3. **Much of this material, however, is readily available and easily transported to the deployed environments**. For example, **steam generators capable of supporting 25 MW of power are readily available in the commercial market and are sized to be transported with relative ease.43** After some additional research a reasonable estimate for the added cost of support structures, training, and water requirements necessary for the reactor an additional $8 million plus $3 million dollars annually would be a likely figure for each power plant. This would put the total cost of operation at $372,603.00, still less than half of the costs associated with the current power infrastructure. **Even with these rough estimates using approximated numbers the benefits of nuclear technology in the deployed environment are substantial.**

 **COMPARISON After calculating the cost per day for each type of technology it can be seen that nuclear power provided by the Gen4 module costs approximately $372,603.00 per day compared to the $755,760.00 for diesel generators. Therefore**, **nuclear power appears to be over 50% less than the current power infrastructure in our deployed environment.** Nonetheless, a number of other factors must be taken into consideration when considering the costs and considerations of nuclear power compared to diesel generators. As stated above, estimated numbers were used for predicting the costs in addition to the cost of the reactor itself. Therefore, fluctuation in costs of transport, training of personnel, water, and additional material necessary for power plant construction may drastically alter the affordability of such power plants. 25 MW steam turbines, for example, may cost as much as $2 million and vary by manufacturer and design. The need for extra training is another added cost of nuclear power. Even though Gen4 Energy includes operator training, licensing support, and technical support with the installation of their units contractors must be hired or Army personnel must be retrained in order to install the modules as well as to address any maintenance or safety issues with the plants.45 It is quite possible, however, that training for Amy personnel could be provided by other branches. The Navy, for example could provide the training or even the personnel for the sustainment of nuclear facilities. **The Army may also require additional security and safety measures because of the dangers of nuclear power even though the units are buried underground and thus safe from threats of terrorism or theft**. **Even though the reactors discussed are buried underground and are relatively isolated from terrorist threats more research and analysis needs to be done by both the Army as well as the manufacturer to address security concerns**. These challenges do not exist with the current power infrastructure. **Personnel are already trained to maintain generators with minimum security and safety requirements. Generators also do not require special transport as they are not considered as volatile and dangerous as their nuclear counterparts**. Additionally, the stigma associated with nuclear power does not exist with diesel power production. **Education of the military population regarding the safety of nuclear power as well as our coalition partners is essential to successful use of this technology. While a host nation may not have an issue with diesel generators they may have concerns with the installation of a nuclear power facility on their own soil.** CONCLUSIONS AND RECOMMENDATIONS Even with the additional costs and limitations nuclear power provided by small reactors is still a viable option for the future of Army operations in the deployed environment. However, this technology may only work in certain areas suitable for this new technology. First, **the technology is more cost-effective in larger FOBs because of cheaper transportation costs as well as the current high security state of these facilities**. Large FOBs may also have greater access to the good and services necessary for the construction and maintenance of these facilities. Finally, larger FOBs allow for the refinement of this technology before such units are deployed closer to the tactical edge. The greatest concern with the placement of nuclear power in the deployed environment is security and threat of attack. Most of these modules are not designed to military specifications and do not take into account the risk of rocket and mortar attack as well as IEDs. More research needs to be done and standards need to be established in order to insure that these units are **durable enough to sustain the myriad of risks associated with being downrange. This establishment of standards and additional testing will make these units much more appropriate for use by our military forces.** **There is no doubt small nuclear modules have a future in the Army’s power infrastructure**. However, **these modules must be refined and tested before being sent overseas, a process which may take many more years of research and design especially with regards to safety and security during a war**. We **recommend that this technology is integrated gradually into the current power infrastructure at larger FOBs where resources are readily available and security is pre-established**. Only after this technology has been tested and proven reliable should it be fielded to smaller FOBs closer to the tactical

#### Aerospace is resilient

Financial Times 11
1/24 (John O'Doherty, 1/24/11, " Defence groups target US military spending ", http://www.ft.com/cms/s/0/3825e908-27f7-11e0-8abc-00144feab49a.html)

BAE, Britain’s largest defence company, has led the charge into the US. In 2004, it made £4.2bn in sales to the US military and £3bn in sales to the UK. By 2009, BAE’s sales to the US military had doubled to £8.4bn while sales to the UK were up by only a third to £4.1bn. Despite the loss of US government contracts for armoured cargo carriers in 2000, that trend has continued over the past year. BAE’s sales to the US military rose 18 per cent year-on-year, while sales to the UK rose a more modest 12 per cent. Chemring – a maker of decoy devices, munitions and detection equipment – has also seen strong US growth. In 2009, sales to the US jumped 66 per cent

 to £236m, accounting for just under half of group revenue. The group’s Niitek division, which makes landmine detection vehicles used to counter roadside bombs in Iraq and Afghanistan, has been particularly successful. Sales to the UK and mainland Europe, the group’s two other large markets, have been buoyant but less rapid, up 45 per cent and 13 per cent respectively over the year. Cobham, which makes cockpit electronics and radio equipment for battlefield communication, has followed a similar path. In 2005, revenues from the US made up 40 per cent of turnover, with 20 per cent from the UK. The US now makes up 62 per cent of the group’s £1.9bn annual turnover while the UK makes up less than 10 per cent. The main attraction of the US market has been the growth in defence spending over the past 10 years. The US defence budget grew from $316bn in 2001 to $793bn in 2010.

#### Not key to heg

Axe 9

military correspondent, regular contributor to The Washington Times, C-SPAN, and Wired, 3/18/9¶ (David, <http://www.warisboring.com/2009/03/18/1804/>)

Analyst Gregory Martin, a retired Air Force general, said the erosion of world influence is largely the result of weak public support for the F-22 and F-35 stealth fighters, which are built by Lockheed Martin, Boeing and Northrop Grumman. “If you can’t afford that [mix], then your national objectives have to be scaled back,” Martin said. In other words, stealth fighters equal national power. And the absence of stealth fighters equals weakness. Hogwash. The economic crisis is having an effect on every country, unevenly. Arguably, the U.S. is faring better than most as investors flee to the comparative safety of the dollar. Power in the world is a relative thing: if everyone else gets much weaker, and we stay the same or only grow a little weak, then we are, in fact, more powerful than we were before. Get it? The global recession, alone, does not mean we are losing influence. In fact, the recession might even boost our influence, by underscoring just how much the world depends on America as a consumer market. But more importantly, American national power does not hinge on fighter jets. We could retire every single fighter in the U.S. Air Force, tomorrow, and still remain the most powerful nation in the world, by far. National power is a complex and shifting thing, comprising military force, financial and cultural influence, leadership in international coalitions and organizations and even language. Every country in the world teaches American English to its business students, aviators and sea captains. Does that have anything to do with the F-22? Do some of our biggest exports — music, movies and television — depend on a squadron of F-35s flying orbits over North Dakota? Ignore the noise coming out of Washington’s punditocracy as the Obama Administration shapes its first defense budget. And when that budget is published, and it (inevitably) includes cuts to Air Force fighter programs, take a deep breath before panicking and consider: Nearly everyone telling you we must buy a given quantity of stealth fighters, or lose global influence, has a financial stake in advocating such purchases. Of the speakers at the Wednesday confab: \* Loren Thompson, from the Lexington Institute, runs a private consultancy for the defense industry, with clients including Lockheed Martin \* Thompson’s colleague, Rebecca Grant, also runs her own consultancy for the defense industry \* Gregory Martin has been a Northrop Grumman consultant The U.S. Air Force is in deep trouble, but it’s trouble of its own making. And it’s testimony to just how overwhelming, and sustainable, is America’s military, cultural, linguistic and financial dominance in the world that our primary military air service can commit slow, institutional suicide without alarming too many people, aside from a few hardware nerds like me and the consultants who get rich gabbing about certain pointy airplanes on behalf of wealthy corporate clients.

#### Aff solves hege

Pfeffer and Macon 1

(Robert A, physical scientist at the Army Nuclear and Chemical Agency in Springfield, Virginia, working on nuclear weapons effects. He is a graduate of Trinity University and has a master's degree in physics from The Johns Hopkins University, William A, a project manager at the Nuclear Regulatory Commission. He was formerly the acting Army Reactor Program Manager at the Army Nuclear and Chemical Agency. He is a graduate of the U.S. Military Academy and has a master's degree in nuclear engineering from Rensselaer Polytechnic Institute, “Nuclear Power: An Option for the Army's Future” <http://www.almc.army.mil/alog/issues/SepOct01/MS684.htm>, SEH)

Military Realities¶ Today, the military faces several post-Cold War realities. First, the threat has changed. Second, regional conflicts are more probable than all-out war. Third, the United States will participate in joint and coalition operations that could take our forces anywhere in the world for undetermined periods of time. Finally, the U.S. military must operate with a smaller budget and force structure. These realities already are forcing substantial changes on the Army.¶ So, as we consider future Army energy sources, we foresee a more mobile Army that must deploy rapidly and sustain itself indefinitely anywhere in the world as part of a coalition force. In addition, this future Army will have to depend on other nations to provide at least some critical logistics support. An example of such a cooperative effort was Operation Desert Storm, where coalition forces (including the United States) relied on some countries to supply potable water and other countries to provide fuel. This arrangement allowed U.S. cargo ships to concentrate on delivering weapon systems and ammunition.¶ But consider the following scenario. The U.S. military is called on to suppress armed conflict in a far-off region. The coalition forces consist of the United States and several Third World countries in the region that have a vested interest in the outcome of the conflict. Our other allies are either unwilling or unable to support the regional action, either financially or militarily. The military effort will be a challenge to support over time, especially with such basic supplies as fuel and water. How can the United States sustain its forces?¶ One way to minimize the logistics challenge is for the Army to produce fuel and potable water in, or close to, the theater. Small nuclear power plants could convert seawater into hydrogen fuel and potable water where needed, with less impact on the environment than caused by the current production, transportation, and use of carbon-based fuels.¶ Seawater: The Ultimate Energy Source¶ Industrial nations are seeing severe energy crises occur more frequently worldwide, and, as world population increases and continues to demand a higher standard of living, carbon-based fuels will be depleted even more rapidly. Alternative energy sources must be developed. Ideally, these sources should be readily available worldwide with minimum processing and be nonpolluting. Current options include wind, solar, hydroelectric, and nuclear energy, but by themselves they cannot satisfy the energy demands of both large, industrial facilities and small, mobile equipment. While each alternative energy source is useful, none provides the complete range of options currently offered by oil. It is here that thinking "outside the box" is needed.¶ As difficult as the problem seems, there is one energy source that is essentially infinite, is readily available worldwide, and produces no carbon byproducts. The source of that energy is seawater, and the method by which seawater is converted to a more direct fuel for use by commercial and military equipment is simple. The same conversion process generates potable water.¶ Seawater Conversion Process¶ Temperatures greater than 1,000 degrees Celsius, as found in the cores of nuclear reactors, combined with a thermochemical water-splitting process, is probably the most efficient means of breaking down water into its component parts: molecular hydrogen and oxygen. The minerals and salts in seawater would have to be removed by a desalination process before the water-splitting process and then burned or returned to the sea.¶ Sodium iodide (NaI) and other compounds are being investigated as possible catalysts for high-temperature chemical reactions with water to release the hydrogen, which then can be contained and used as fuel. When burned, hydrogen combines with oxygen and produces only water and energy; no atmospheric pollutants are created using this cycle.¶ Burning coal or oil to generate electricity for production of hydrogen by electrolysis would be wasteful and counterproductive. Nuclear power plants, on the other hand, can provide safe, efficient, and clean power for converting large quantities of seawater into usable hydrogen fuel.¶ For the military, a small nuclear power plant could fit on a barge and be deployed to a remote theater, where it could produce both hydrogen fuel and potable water for use by U.S. and coalition forces in time of conflict. In peacetime, these same portable plants could be deployed for humanitarian or disaster relief operations to generate electricity and to produce hydrogen fuel and potable water as necessary. Such dual usage (hydrogen fuel for equipment and potable water for human consumption) could help peacekeepers maintain a fragile peace. These dual roles make nuclear-generated products equally attractive to both industry and the military, and that could foster joint programs to develop modern nuclear power sources for use in the 21st century.

### Recommend CP

**Certainty is key – crucial for investment**

**Trembath 11**

Alex, Policy associate in the Energy and Climate Program at Breakthrough. He is the lead or co-author of several Breakthrough publications, including the 2012 report, 2/4/11, [Nuclear Power and the Future of Post-Partisan Energy Policy](http://leadenergy.org/2011/02/the-nuclear-option-in-a-post-partisan-approach-on-energy/), "Beyond Boom and Bust: Putting Clean Tech on a Path to Subsidy Independence" and "Where the Shale Gas Revolution Came From”, <http://leadenergy.org/2011/02/the-nuclear-option-in-a-post-partisan-approach-on-energy/>

**If there is one field of the energy sector for which certainty of political will and government policy is essential, it is nuclear power. High up front costs for the private industry, extreme regulatory oversight and public wariness necessitate a committed government partner for private firms investing in nuclear technology. In a new** [**report**](http://www.thirdway.org/publications/370) **on the potential for a “nuclear renaissance,” Third Way references the failed cap-and-trade bill, delaying tactics in the House vis-a-vis EPA regulations on CO₂, and the recent election results to emphasize the difficult current political environment for advancing new nuclear policy. The report, “The Future of Nuclear Energy,” makes the case for political certainty: “It is difficult for energy producers and users to estimate the relative price for nuclear-generated energy compared to fossil fuel alternatives (e.g. natural gas)–an essential consideration in making the major capital investment decision necessary for new energy production that will be in place for decades.” Are our politicians willing to match the level of certainty that the nuclear industry demands? Lacking a suitable price on carbon that may have been achieved by a cap-and-trade bill removes one primary policy instrument for making nuclear power more cost-competitive with fossil fuels. The impetus on Congress, therefore, will be to shift from demand-side “pull” energy policies (that increase demand for clean tech by raising the price of dirty energy) to** [**supply-side “push” policies**](http://leadenergy.org/2010/09/supply-demand-energy-innovation/)**, or industrial and innovation policies. Fortunately, there are signals from political and thought leaders that a package of policies may emerge to incentivize alternative energy sources that include nuclear power. One place to start is the recently deceased American Power Act, addressed above, authored originally by Senators Kerry, Graham and Lieberman. Before its final and disappointing incarnation, the bill** [**included**](http://www.huffingtonpost.com/2010/05/12/american-power-act-photos_n_573643.html#s90041&title=undefined) **provisions to increase loan guarantees for nuclear power plant construction in addition to other tax incentives. Loan guarantees are probably the most important method of government involvement in new plant construction, given the high capital costs of development. One wonders what the fate of the bill, or a less ambitious set of its provisions, would have been had Republican Senator Graham not abdicated and removed any hope of Republican co-sponsorship. But that was last year. The changing of the guard in Congress makes this a whole different game, and the once feasible support for nuclear technology on either side of the aisle must be reevaluated. A New York Times** [**piece**](http://www.nytimes.com/2010/11/17/business/energy-environment/17NUCLEAR.html) **in the aftermath of the elections forecast a difficult road ahead for nuclear energy policy, but did note Republican support for programs like a waste disposal site and loan guarantees. Republican support for nuclear energy has roots in the most significant recent energy legislation, the Energy Policy Act of 2005, which passed provisions for nuclear power with wide bipartisan support. Reaching out to Republicans on policies they have supported in the past should be a goal of Democrats who wish to form a foundational debate on moving the policy forward. There are also signals that key Republicans, notably** [**Lindsey Graham**](http://washingtonindependent.com/99171/graham-circulating-clean-energy-standard) **and** [**Richard Lugar**](http://www.plattsenergyweektv.com/story.aspx?storyid=132784&catid=293)**, would throw their support behind a clean energy standard that includes nuclear and CCS. Republicans in Congress will find intellectual support from a group that AEL’s Teryn Norris coined** [**“innovation hawks,”**](http://leadenergy.org/2011/01/the-rise-of-innovation-hawks/) **among them Steven Hayward, David Brooks and George Will. Will has been** [**particularly outspoken**](http://www.newsweek.com/2010/04/08/this-nuclear-option-is-nuclear.html) **in support of nuclear energy, writing in 2010 that “it is a travesty that the nation that first harnessed nuclear energy has neglected it so long because fads about supposed ‘green energy’ and superstitions about nuclear power’s dangers.” The extreme reluctance of Republicans to cooperate with Democrats over the last two years is only the first step, as any legislation will have to overcome Democrats’ traditional opposition to nuclear energy. However, here again there is reason for optimism. Barbara Boxer and John Kerry bucked their party’s long-time aversion to nuclear in a precursor bill to APA, and Kerry continued working on the issue during 2010. Jeff Bingaman, in a speech earlier this week, reversed his position on the issue by calling for the inclusion of nuclear energy provisions in a clean energy standard. The Huffington Post** [**reports**](http://www.huffingtonpost.com/2011/02/01/sen-jeff-bingaman-backs-n_n_816864.html) **that “the White House reached out to his committee [Senate Energy] to help develop the clean energy plan through legislation.” This development in itself potentially mitigates two of the largest obstacle standing in the way of progress on comprehensive energy legislation: lack of a bill, and lack of high profile sponsors. Democrats can also direct** [**Section 48C**](http://leadenergy.org/2010/12/clean-energy-financing-first-steps-towards-post-partisan-effort/#more-3320) **of the American Recovery and Reinvestment Act of 2009 towards nuclear technology, which provides a tax credit for companies that engage in clean tech manufacturing. Democrats should not give up on their policy goals simply because they no longer enjoy broad majorities in both Houses, and Republicans should not spend all their time holding symbolic repeal votes on the Obama Administration’s accomplishments. The lame-duck votes in December on “Don’t Ask, Don’t Tell,” the tax cut deal and START indicate that at least a few Republicans are willing to work together with Democrats in a divided Congress, and that is precisely what nuclear energy needs moving forward. It will require an agressive push from the White House, and a concerted effort from both parties’ leadership, but the road for forging bipartisan legislation is not an impassable one. The politician with perhaps the single greatest leverage over the future of nuclear energy is President Obama, and his rhetoric matches the challenge posed by our aging and poisonous energy infrastructure. “This is our generation’s Sputnik moment,” announced Obama recently. Echoing the calls of presidents past, the President used his** [**State of the Union**](http://www.slate.com/id/2281847/) **podium to signal a newly invigorated industrialism in the United States. He advocated broadly for renewed investment in infrastructure, education, and technological innovation. And he did so in a room with many more members of the opposition party than at any point during the first half of his term. The eagerness of the President to combine left and right agendas can hopefully match the hyper-partisan bitterness that dominates our political culture, and nuclear power maybe one sector of our economy to benefit from his political leadership.**

**DoD will block**

**King 11** Marcus King, Ph.D., Center for Naval Analyses Project Director and Research Analyst for the Environment and Energy Team LaVar Huntzinger, Thoi Nguyen, March 2011, Feasibility of Nuclear Power on U.S.Military Installations, www.cna.org/sites/default/files/research/Nuclear Power on Military Installations D0023932 A5.pdf

**The most significant risk for SMR power plants is** associated with **being an early adoptor** of new technology. **From a DoD perspective, economic feasibility depends on negotiating arrangements** for the project that ensure DoD is not responsible for FOAK expenses. Having contractor owners and operators would reduce operating risks associated with being an early adoptor. **If partners can’t be found who are willing to bear** the FOAK and **early adoptor risks then DoD should not undertake such a project**. The recent MOU between DOE and DoD identifies a framework for cooperation and partnership for sharing risks associated with this type of project.

**Should means ought**

**Howard 5**

Taylor and Howard, 05 - Resources for the Future, Partnership to Cut Hunger and Poverty in Africa (Michael and Julie, “Investing in Africa's future: U.S. Agricultural development assistance for Sub-Saharan Africa”, 9/12, http://www.sarpn.org.za/documents/d0001784/5-US-agric\_Sept2005\_Chap2.pdf)
Other legislated DA earmarks in the FY2005 appropriations bill are smaller and more targeted: plant biotechnology research and development ($25 million), the American Schools and Hospitals Abroad program ($20 million), women’s leadership capacity ($15 million), the International Fertilizer Development Center ($2.3 million), and clean water treatment ($2 million). Interestingly, in the wording of the bill, Congress uses the term shall in connection with only two of these eight earmarks; the others say that USAID should make the prescribed amount available. **The difference between shall and should may have legal significance—one is clearly mandatory while the other is a strong admonition**—but it makes little practical difference in USAID’s need to comply with the congressional directive to the best of its ability.

### Adv CP

New US nuclear power demand causes nuclear expertise revival

**APS 8**

APS (American Physical Society), Report from the APS Panel on Public Affairs Committee on Energy and Environment, June 2008, Readiness of the U.S. Nuclear Workforce for 21st Century Challenges, http://www.aps.org/policy/reports/popa-reports/upload/Nuclear-Readiness-Report-FINAL-2.pdf

The 21st century has brought a growing realization that **it is time to reexamine the adequacy of the U.S. nuclear workforce and its ability to deal with many old and new challenges** our nation faces. This report draws attention to critical shortages in the U.S. nuclear workforce and to problems in maintaining relevant educational modalities and facilities for training new people. This workforce comprises nuclear engineers, nuclear chemists, radiochemists, health physicists, nuclear physicists, nuclear technicians, and those from related disciplines. **As a group they play critical roles in the nation’s nuclear power industry, in its nuclear weapons complex, in its defense against nuclear** and other forms of **terrorism**, and in several aspects of healthcare, industrial processing, and occupational health and safety. Each of these areas presents significantly more dramatic challenges than it did not very many years ago. Each is an important aspect of our national security.

Nuclear Power: Past and Present

**Workforce shortages** in the arena of commercial nuclear power, and the problem of maintaining modernized training facilities, mainly **stem from** the 30-year **stasis in U.S. demand for new civilian nuclear power plants**1. The number of operating civilian nuclear reactors in the U.S. has remained at about 100 during this time. Thus, U.S. vendors have been forced to look abroad for sales. **Some have** either **ceased construction of new reactors entirely** or else significantly scaled back business in this area. Their continuing, **largely static, nuclear engineering workforce needs have been met through** a combination of **hiring those trained in university** nuclear engineering **programs and retraining others whose original expertise was in some other field** (usually mechanical engineering). Retirees from the nuclear Navy also have played an important role.

**A natural result of this stasis was** for many years a greatly **reduced interest among undergraduates in nuclear science and engineering** programs2**. In turn, this put great pressure on U.S. universities to scale back in these areas**. Recently, however, the Federal government, through the Department of Energy (DOE), dramatically increased funding for these educational efforts. This played a major role in increasing undergraduate student enrollments in nuclear engineering from a low point of 480 in 1999 to 1,933 in 2007. Declaring the problem to be solved, DOE called for the termination of its university nuclear science and engineering programs for FY 2007. Congress in turn provided reduced funding for FY 2007 and transferred all the programs except reactor fuel services to the Nuclear Regulatory Commission (NRC) for FY 2008. These “feast or famine” gyrations have led to significant instabilities: the number of university nuclear engineering departments has decreased from 66 in the early 1980s to 30 today, and the number of university reactors has dwindled from 63 to 25 during essentially the same period.

Revitalized nuclear expertise vital to stockpile stewardship, nuclear forensics, and revolutions in disease containment

**Mtingwa, 9**

(Chair of the POPA study on the Readiness of the U.S. Nuclear Workforce for 21st Century Challenges. He is an accelerator physicist and Senior Lecturer at MIT. “Readiness of the U.S. Nuclear Workforce for 21st Century Challenges,” January, http://www.aps.org/units/fps/newsletters/200901/mtingwa.cfm)

On another front, the tragedy of September 11, 2001, has brought an intense focus on the issue of national preparedness against terrorism. For emergencies involving a terrorist action or an accident at a nuclear reactor, experts must be ready to respond. Thus it is important to attend to the nuclear workforce needs of the Department of Homeland Security, the Department of Defense, the NRC, and specialized areas of the Department of Energy. An important example of the latter is the Nuclear Emergency Support Team from DOE’s National Nuclear Security Administration that travels to the site of a suspected nuclear or radiological weapon to mitigate the situation. Thus, the nation will need to expand its nuclear workforce to initiate new efforts in nuclear forensics and other parts of the Homeland Security portfolio, and to replace many retiring members of the weapons workforce.

For many years, funding for U.S. university nuclear science and engineering research and education has been heavily dependent upon a single source: previously DOE and now the NRC. Therefore, it is no accident that the vitality of the nation’s university nuclear science and engineering education and infrastructure program closely tracked funding support provided by DOE over the last 15 years. As shown in Fig. 1, as DOE’s funding increased in the decade 1997 through 2007, undergraduate student enrollment in nuclear engineering increased – from a low of 480 students in 1999 to a high of 1,933 in 2007. For nuclear engineering students at minority-serving institutions, DOE support created new opportunities. While other factors also contributed to the dramatic increase in undergraduate enrollments, university administrators indicate that increases in Federal funding were indeed an important factor. In the aftermath of the accidents at Three Mile Island in 1979 and Chernobyl in 1986, DOE support for nuclear science and engineering education declined precipitously as industry construction of new plants ceased and student interest and career opportunities declined. In 1997, the President’s Committee of Advisors on Science and Technology issued a report that urged President Clinton to reinvest in university nuclear science and engineering research and education . PCAST also urged him to establish the Nuclear Energy Research Advisory Committee to provide advice to DOE on this reinvestment. In the mid-1990s, the Clinton Administration recognized the potential for a resurgence in nuclear technology, and constituted NERAC in 1998 to advise DOE as it began reinvesting both funds and management attention to rebuilding the educational infrastructure for nuclear science and engineering. This support was implemented by creating a suite of eleven targeted programs, among which perhaps the most influential was the Innovations in Nuclear Infrastructure and Education (INIE) program, which encouraged the development of strategic consortia among universities, DOE national laboratories, and industry.

When DOE released its FY2007 budget request, it announced that it had completed its mission in the area of nuclear science and engineering education and made plans to terminate the program. DOE proposed essentially zero funding for nuclear science and engineering education for both FY2007 and FY2008. This signaled a significant reversal of fortune not seen since the early 1990s. DOE proposed to return to the practice of those years by providing only basic fuel services for university research reactors under a new infrastructure program. In FY2007, Congress rejected DOE’s proposal to terminate the program and instead provided $16.5 million – far less than the $27 million the program received in FY2006. In FY2008, Congress again rejected ending the program and allocated $17.9 million in the FY2008 Consolidated Appropriations Act. Of this amount, $2.9 million remained at DOE for university reactor fuel services, and Congress transferred to the NRC $15 million for the rest of the programs. While these funds would defer to some extent the erosion of nuclear science and engineering education in the U.S., they are not sufficient to maintain vital elements of the nation’s programs, particularly the highly successful INIE program. It was last funded in FY2006. As for nuclear chemistry and radiochemistry, these are two fields that overlap in many ways. Simply put, radiochemistry is the study of radioactive elements using chemical techniques, focusing on their radioactive characteristics. Nuclear chemistry is the study of the fundamental properties of nuclei, both radioactive and non-radioactive, using chemical techniques. It is quite close to the field of nuclear physics.

There has been a continuing dramatic decrease in the number of Ph.D.s earned annually in nuclear chemistry, as shown in Fig. 2. It reflects the fact that only a handful of U.S. university chemistry departments currently have professors with active research programs in nuclear chemistry. Thus, advanced education in nuclear chemistry education is all but extinct in the United States. If nuclear chemistry and radiochemistry education programs are not reinvigorated, the U.S. will lack the expertise required to pursue promising advanced R&D in a myriad of disciplines. In addition to processing both fresh and spent fuel for nuclear reactors, including basic research on spent fuel separations and transmutation technologies, nuclear chemistry and radiochemistry are also extremely important to the nation’s security and health in the following cross-cutting roles: (1) **nuclear weapons stockpile stewardship**, (2) **nuclear forensics and surveillance of clandestine nuclear activities**, (3) monitoring of radioactive elements in the environment, (4) production of radioisotopes, and (5) **preparation of radiopharmaceuticals for therapeutic and diagnostic medical applications.**

When considering the nuclear enterprise, the status of the health physics workforce and its training facilities must be considered. For occupational safety and the protection of the public, health physics professionals are employed in many sectors, including the commercial nuclear power industry, DOE’s national laboratories, homeland security, the NRC, the military and medical facilities.

The nation’s health physics capabilities will be impacted negatively over the next decade due to the number of expected retirements, coupled with inadequate numbers of graduates entering the field. Fig. 3 provides data on health physics graduates. Considering that the retirement rate of health physicists in the U.S. is roughly 200 per year , the number of health physics graduates does not allow for much increase in the demand for their services.

Turning to university research and training reactors, their number has decreased from 63 in the late 1970’s to 25 today. Recently a number of them have been decommissioned, including those at Cornell University and the University of Michigan. During FY2006, DOE’s INIE Program provided $9.41 million to six consortia consisting of both the higher power (usually 1 MW and above) research reactors as well as the lower power (usually less than 1 MW) training reactors. Research reactors mainly perform state-of-the-art experiments and provide irradiation services for private industry and other researchers. Training reactors mainly provide hands-on experiences for students. The INIE program had numerous significant successes, including helping to increase the number of students studying nuclear science and engineering, stimulating the hiring of new tenure-track faculty, providing seed money for a number of major infrastructure and instrumentation purchases and upgrades, fostering collaborations among members of each consortium and with national laboratories, freeing a number of university reactors from threats of decommissioning, assisting with the establishment of a nuclear technology Associate’s degree program at Linn State Technical College in Missouri, and helping to establish a new undergraduate nuclear engineering program at South Carolina State University, one of the Historically Black Colleges and Universities . That program is the first to be created in over a quarter-century at any U.S. university and is the only undergraduate nuclear engineering program located at an HBCU . Nuclear physicists are an indispensable part of the workforce, since a wealth of high precision actinide fission and neutron capture cross section data is needed to support the design of future nuclear reactors, including advanced light water reactors and Generation IV systems . Without such data, simulation studies would not be accurate enough to lead to reliable designs and conclusions . From their systems analyses, DOE researchers have identified the cross sections of particular importance. The U.S. has neutron source facilities, such as the Los Alamos Neutron Science Center, that can be used for many of the cross section measurements, and capabilities not present in the U.S. usually can be found elsewhere . Many of the cross section measurements are extremely challenging and entirely new techniques need to be developed. Moreover, much more fundamental work is needed to understand the basic physics of nuclear isotopes and their various cross sections. A better theoretical understanding would reduce the uncertainties in many applications. All of these issues are fertile ground for Ph.D. research.

Next, to evaluate the supply of nuclear engineers with at least a Bachelor’s degree that is needed for nuclear power generation between now and 2050, it is useful to consider three scenarios: (1) maintaining the current number of nuclear reactors (about 100) without reprocessing, (2) doubling the number of reactors without reprocessing fuel, and (3) doubling the number of reactors while closing the fuel cycle by reprocessing and recycling spent fuel.

Due to the shortage of nuclear engineers over recent decades, reactor vendors have resorted to hiring far more mechanical engineers than nuclear engineers and providing them with nuclear-related training. With approximately 35% of nuclear workers reaching retirement age in the next five years , industry will likely see some increase in engineering hiring across the board. This will heighten demands for nuclear engineering education, whether supplied by university programs or by the employers themselves. Scenario 1 has a chance of being sustainable. On the other hand, **doubling the number of nuclear reactors to about 200 by 2050 will require a significant augmentation of the nuclear workforce**. Vendors, utilities, and the NRC will need to increase their ranks by about 300 engineers with some nuclear training per year, plus replace retirees. This **growth in manpower is a direct result of what would be an increasing demand for significantly improved reactor designs, increased reactor operations at the utilities**, and a much greater oversight burden at the NRC. On the other hand, the number of new nuclear engineering graduates at all degree levels entering nuclear employment is about 160. Hence, assuming that the supply of nuclear engineers coming from university training programs follows recent trends, employers will need to train significantly more non-nuclear engineers to do nuclear engineering tasks than they do now. It is doubtful that the massive reactor building campaigns necessary to double the number of reactors by 2050 could thrive under such a burden. The clear message is that **our capability for university-based training of nuclear scientists and engineers cannot be allowed to diminish further.** Scenario 3 is the most problematic. This scenario has all the workforce challenges of Scenario 2, plus the need for highly trained nuclear chemists and radiochemists who are indispensable for reprocessing. Unlike France, the U.S. has no governmental agency charged with educating nuclear chemists and radiochemists. Those wanting to pursue these fields are educated under faculty mentors at universities. The growing scarcity of such mentors has thus led to a crisis in the U.S. In the long haul, **the U.S. will lose ground in its R&D on many fronts,** including devising more efficient and safer methods of processing both fresh and spent fuels for all future nuclear energy scenarios. Nuclear chemists and radiochemists with Ph.D.s would be needed to train the large cadre of radiochemical technicians who would carry out most of this work, and they would be needed at universities and national laboratories to spearhead the research that leads to breakthrough radiochemical technologies. Thus, any venture into spent fuel reprocessing, and fulfilling nuclear chemists’ and radiochemists’ many other cross-cutting roles in such areas as homeland security and public health, **will not be possible unless expertise is imported from abroad**. This modality is made much more difficult by the requirement that **many of these workers must be U.S. citizens**. In the U.S., market-driven forces will not be able to produce additional domestically trained nuclear chemists and radiochemists if the educational infrastructure continues to disappear.Aside from nuclear power, the nation will continue to need a significant number of talented, well-trained nuclear scientists and engineers to maintain the strength of its homeland security and nuclear weapons programs. These complexes must be safeguarded, and this is a clear responsibility of the Federal government. To satisfy these and nuclear power’s demands on the nuclear workforce, the Federal government should stabilize the long-term funding and management of nuclear science and engineering education programs, in particular for the university research and training reactor facilities. The number of nuclear engineering departments and university reactors should not be allowed to diminish further. Also, existing reactors could be utilized more optimally by expanding distance-learning opportunities. As for nuclear chemistry and radiochemistry, there is a huge need for the Federal government to establish a cross-cutting workforce initiative that includes fellowships and scholarships for students, support for postdoctoral researchers, incentives that stimulate industrial support of faculty positions, effective means of outreach to the general public, and increased support for summer schools in these disciplines. For health physics, the Federal government should ensure that there is a sufficient number of faculty with nuclear reactor-related experience to train the necessary numbers of health physicists for the nuclear power and other industries. Finally, the Federal government should increase support for research on the fundamental physics and chemistry of actinide fission and neutron capture. There is also an educational role for private industry. Nuclear vendors and utilities should expand undergraduate student internships, graduate student traineeships, cooperative education opportunities, and training on reactor simulators at their facilities. To conclude, creating new reactor designs, revolutionary medical applications of radiation, and many other nuclear endeavors present exciting challenges. As such, the nuclear science and engineering community should develop programs to **encourage the general public to view these fields as exciting areas of research** that present intellectually and financially rewarding career paths.

Key to credible nuclear deterrence

**Browne et al 8**

John C. Browne, Los Alamos National Laboratory (retired), Clark Murdock, Center for Strategic and International Studies, Francis Slakey, American Physical Society, Benn Tannenbaum, American Association for the Advancement of Science, Jessica Yeats, Center for Strategic and International Studies, December 2008, Nuclear Weapons in 21st Century U.S. National Security, http://csis.org/files/media/csis/pubs/081208\_nuclear\_weapons\_report.pdf

**To maintain a credible nuclear deterrent, the U**nited **S**tates **should sustain** the **necessary human capital**: **as** much of **the** existing **workforce ages,** experience, **expertise and competence will** likely **decline across the nuclear enterprise** including the Department of Defense (DOD), Department of Energy (DOE), and the military services. A broader mission for the nuclear weapons labs that addresses **energy security** as well as nuclear security interests **can help recruit, retain, and sustain highly skilled and motivated scientists and engineers**.

Loss of U.S. nuclear primacy causes global nuclear war

**Caves 10**

(John P, Senior Research Fellow in the Center for the Study of Weapons of Mass Destruction at the National Defense University, January, Strategic Forum, No. 252, “Avoiding a Crisis of Confidence in the U.S. Nuclear Deterrent,”)

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

### Fiscal Cliff

#### Immigration reform is at the top of the agenda

Raji 11/7

Manu Raji (writer for Politico) November 7, 2012 “Harry Reid agenda: Filibuster crackdown, tax increases” http://www.politico.com/news/stories/1112/83514.html

Once the procedural snafus are resolved, Reid said “very high” on his priority list will be an attempt to pass an immigration overhaul, an issue important to the Latino community that powered Tuesday night’s Democratic wins. But it would certainly start a divisive and emotional debate certain to alienate conservative members of both parties. Reid said he could get 90 percent of his caucus to support such a measure. Republicans, he said, would block immigration reform “at their peril.” “Not for political reasons; because it’s the wrong thing to do to not have comprehensive immigration reform,” Reid said. “The system’s broken and needs to be fixed.”

**No deal – the Tea Party won’t cave**

**Collender 9-26**

Stan is a former staffer on both the House and Senate budget committees, founder of the blog “Capital Gains and Games,” and a partner at Quorvis Communications, where he works with clients in the financial sector, “Boehner May Have to Let the Debt Ceiling Happen to Stay Speaker,”

I've come to the conclusion that House Speaker John **Boehner** (R-OH**) is going to have a** very **difficult time making any deal with** the **Democrats during the lame duck** session on taxes and spending – that is, on preventing the fiscal cliff – **and still remain as speaker** in the next Congress. **That means** that **avoiding the fiscal cliff will be** far **harder than any analysis** of the situation **has dared to conclude**.¶ Yes, this assumes that Republicans will keep the majority in the House next year and, therefore, that the GOP will be picking one of its own as speaker. But just consider what would happen if the following occurs.¶ No matter who wins the presidency and is in the majority in the Senate, the GOP retains control in the House.¶ **Boehner wants to stay as speaker** even if House Republicans lose some seats and their majority gets smaller.¶ **The smaller GOP majority will prompt some to insist** **that Boehner should not be speaker** in the next Congress. (**Given the tea party wing’s distrust of Boehner** since at least the beginning of 2011, it’s not at all clear that there won’t be some effort to unseat him even if the GOP doesn’t lose seats in the 2012 election.)¶ **In other words, Boehner will be on a very short leash** during the lame duck **and will have to continually prove to his tea party wing that he merits its support**. Unless Democrats are willing to do something almost unimaginable and vote for **Boehner**, he **cannot remain as speaker** **without the tea party wing’s votes**.¶ **But Boehner isn’t likely to get tea party support if he shows any willingness to compromise with congressional Democrats or** (perhaps especially) the **Obama** White House **on extending the tax cuts and preventing the military spending portion of the sequester**. This means **there can’t be a quick deal** of any kind on fiscal cliff-related policies **because of the tea party’s mantra that** concluding **a deal** long **before the deadline means** that **you are** probably **leaving something on the table**.¶ It also likely means that **any deal will be very difficult because** of **the tea party** **wing’s other basic tenet that compromise** of any kind (**and especially when it comes to taxes) is a sin**.¶ There will be a GOP caucus meeting during the lame duck at which the Republican candidate for speaker will be chosen and, in theory, that will settle the matter before the fiscal cliff is triggered at midnight January 1. But…and it’s a big but…t**he formal election of the speaker won’t occur until the new Congress convenes** in early **January after all of the fiscal cliff** spending and tax **changes have kicked in**. That will give Boehner watchers and opponents another bite at the apple weeks after the caucus decision. In other words, **Boehner will be on that very short leash into January** and nothing will really be settled before the cliff happens**.¶ Boehner has already shown that he’s more than willing to take positions to accommodate his tea party wing so he can stay as speaker**. For example, **his** fire-and-brimstone **speech in May when he insisted that he would not allow the debt ceiling to be raised** again **unless federal spending was cut** by the same number of dollars the borrowing limit is raised – as basic a tea party position as there is -- was clearly an effort to show that faction of his party that he was one of them and totally worthy of their support. **There’s no reason to think Boehner won’t do that** and more **again.¶ This scenario makes a deal to avert the fiscal cliff far less likely than anyone is assuming**. Indeed, **if the White House doesn’t cave to GOP demands, it almost seems as if Boehner will have to let the fiscal cliff happen to keep his job**. It also seems to indicate that the most likely agreement will be one that stops the cliff from being implemented fully through the year after it has been triggered.¶ There are a number of reasons why this scenario might not play out.¶ For example, a total capitulation to the GOP by the White House might be more likely than it current seems. After all, **the administration did that before when it came to letting the tax cuts expire in 2010**.¶ Or Romney might get elected and the GOP will go with Boehner because it will assume that it will be able to fix what it doesn’t like after the inauguration.¶ Or the tea party wing will realize that not supporting Boehner when the House convenes in January wouldn’t make a great deal of sense because that could mean that the Democratic nominee would get the greatest number of votes and be elected speaker. That might force the tea party wing to have to decide who it dislikes more: Boehner or Nancy Pelosi (D-CA).¶ To avoid this, the GOP caucus would have to make it clear to Boehner before the formal vote that he does not have enough support to be elected and, therefore, should step aside. The question at that point would be whether Boehner would have the testicular fortitude to play extreme political hardball, not withdraw and dare his own party to vote against him.¶ And it’s certainly also possible that after the election Boehner will become a much stronger speaker than he has been over the past two years and figure out a way to get the GOP caucus to go along with a compromise before the fiscal cliff occurs. On the one hand, he succeeded in doing something like that a few weeks ago when he convinced his caucus to vote for the fiscal 2013 continuing resolution with a higher spending level than many in the tea party wing wanted. On the other hand, Boehner was rolled repeatedly over the past two years by the tea party on taxing and spending issues and it may revert back to that previous take-no-prisoners attitude once the election is over.¶ **Bottom line:** **The odds of the fiscal cliff happening are greater than most people are currently willing to admit.**

#### Both sides are hardening positions

Kelley Beaucar Vlahos (writer for Fox News) November 7, 2012 “

Gridlock as usual or new era of compromise? Washington stares down 'fiscal cliff' crisis after election” http://www.foxnews.com/politics/2012/11/07/gridlock-as-usual-or-new-era-compromise-washington-faces-choice-after-election/

Obama and the Democrats have shown interest in letting the so-called Bush tax rates expire for the top earners, while Republicans have not shown an inclination yet for budging on it. Time will tell if there is room for negotiation -- a combination of increased revenue and cuts -- though Obama may hold the upper hand. Still, the ideological lines are firm and with the addition of two fiscal conservatives to the Republican ranks in the Senate -- Ted Cruz from Texas, and Jeff Flake in Arizona -- there might be more of a hardening than Hill watchers think, said David Boaz, senior politics analyst from the Cato Institute. "My gut level instinct would be there are fundamental differences between the Democrats and the Republicans in Congress and the election hasn't moved us any closer to resolving these questions," he said.

**No PC**

**Chicago Tribune 11-1**

“Economic Uncertainty to Linger: Even After Election,”

While action isn't required until the end of December, analysts anticipate that the afterglow of the presidential election will quickly dissipate during the next two months as investors grow anxious about the December deadline and the potential outcome for the economy.¶ "Continued gridlock is a risk," Chadha said. On the other hand, "bipartisan compromise with orderly negotiations would see equities rally."¶ But current political **polls indicate** that **neither candidate will win with a mandate**. So analysts are not anticipating orderly negotiation on tax and spending cuts this year or next.¶ "**A close race or disputed result could reduce the political capital of the winner, diminishing prospects for a compromise solution for the fiscal cliff in the lame-duck session of Congress**," said Citigroup global political analyst Tina Fordham.¶

#### Plan popular in Congress - only 1 vote against it and both parties cosponsor

Pendidikan ‘11

Cinta writes for the Love and Like Education Blog, “Sanders is the Sole Vote Against Small Modular Reactor Research,” <http://loveandlikeeducation.blogspot.com/2011/08/bernie-sanders-and-small-modular.html>

**Sanders is Sole Vote Against Small Modular Reactor Research**¶ Bernie Sanders and Small Modular Reactors¶ Senator Bernie Sanders often speaks about his opposition to Vermont Yankee as having something to do with the age of the plant, the fact it is owned by Entergy, or his "state's rights" stance about regulating nuclear power plants.¶ Recently, however, Sanders made it clear that he is against nuclear power in any form and is proud of that opinion. On Senator Sanders website, he featured the fact that he was the only vote against "a pair of measures that would promote the development of small modular reactors."¶ One of these measures was the Nuclear Power Act S512. **This act would authorize the Secretary of Energy to start a cost-shared program for development o**f small modular reactors **(SMRs).¶ This act had strong bi-partisan support, being sponsored by 3 Republican and 4 Democratic Senators. The act requires research and development funds for SMRs.** The Act is still in process, and does not have a firm dollar amount attached, but the dollar amount is likely to be small (in government terms, at least.). **Current estimates are $100 million per fiscal year** for four years, starting next year.¶ The act also requires that industry cost-share the expense. If industry doesn't think it is worth spending money on the research, the research will not receive government funding either.¶ As a background to the probable cost of this Act, we should note that President Obama requested $4.8 billion dollars for Department of Energy research, of which $3.2 billion is allocated for renewable energy and energy efficiency research. (This number has changed with the debt deal, but new numbers are not available at this time.)¶ Small Modular Reactors for The Future¶ Sander's opposition to this Nuclear Power Act will hurt America's chances to develop an important new exportable technology. Outside of Europe, the nuclear renaissance remains in full swing, with reactors being ordered and built in Arabia, China, India and Southeast Asia. Developing a strong set of SMR designs would be America's best chance to re-entering the world market for nuclear power.¶ SMRs are modular (assembled in a factory and delivered to the site), small (50 to 225 MW) and have many safety features, such as passive cooling. SMRs are expected to have a huge international market. They suitable for many places that do not have the population density or money for the current crop of huge reactors (1200 MW, built on site at great expense). SMRs would make nuclear power affordable and salable many places.¶ Westinghouse and Babcock & Wilcox have invested significant amounts of their own money in developing these products. The NRC is also active in assessing preliminary designs. At another Senate committee meeting on SMRs, Commissioner Magwood of the NRC said that he does not expect decisions made by the NRC to be the critical factor in the success or failure of SMRs. Magwood noted that SMRs have passive safety features and large water inventories; these would be considered during license review.¶ America Fallen Behind¶ America has fallen far behind the rest of the world in most nuclear technologies. Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs) were developed in this country. They are being sold all over the world, but not by United States companies. We're out of the running. Other countries licensed and improved our original technologies. Companies from France, Korea, Russia and China compete to build large reactors in China, Arabia, and Southeast Asia.¶ Three American companies have put millions of dollars into the development of SMRs: Westinghouse, Babcock & Wilcox, and NuScale (a small start-up). Many people in the nuclear industry feel that the race to develop the first successful SMR is a truly high-stakes race, being fought at the level of nationwide efforts. Luckily, SMR development has bi-partisan support, and Mr. Sanders was alone in his opposition to supporting American industry efforts to develop these plants.¶ Should Government Be Involved?¶ Of course, one can make a case that the government should get out of the energy research business altogether. If Senator Sanders wished to save tax dollars by cutting all energy-research programs, he might have a valid case. However, if the government does plan to spend money on energy research, cost-sharing with industry on a new nuclear technology is certainly a far better use of funds than many of the projects in the swollen DOE renewable budget.

**Bipart support for SMR’s in Congress**

**E&E News 9-24**

“DOE Funding for Small Reactors Languishes as Parties Clash on Debt,” <http://www.eenews.net/public/Greenwire/2012/09/24/3>

Some of the nation's largest nuclear power companies are anxious to hear whether they will get a share of a $452 million pot from the Department of Energy for a new breed of reactors that the industry has labeled as a way to lessen the safety risks and construction costs of new nuclear power plants.¶ The grant program for these "small modular reactors," which was announced in January, would mark the official start of a major U.S. foray into the technology even as rising construction costs -- especially when compared to natural-gas-burning plants -- cause many power companies to shy away from nuclear plants.¶ DOE received four bids before the May 21 deadline from veteran reactor designers Westinghouse Electric Co. and Babcock & Wilcox Co., as well as relative newcomers Holtec International Inc. and NuScale Power LLC. Now the summer has ended with no announcement from DOE, even though the agency said it would name the winners two months ago.¶ As the self-imposed deadline passed, companies started hearing murmurs that a decision could come in September, or perhaps at the end of the year. To observers within the industry, it seems that election-year calculations may have sidelined the contest.¶ "The rumors are a'flying," said Paul Genoa, director of policy development at the Nuclear Energy Institute, in an interview last week. "All we can imagine is that this is now caught up in politics, and the campaign has to decide whether these things are good for them to announce, and how**."¶ Small modular reactors do not seem to be lacking in political support. The nuclear lobby** has historically **courted both Democrats and Republicans and** still **sees itself as being in a strong position with key appropriators on both sides of the aisle**.¶ Likewise, **top energy officials in the Obama administration have hailed the promise of the new reactors, and they haven't shown any signs of a change of heart.** DOE spokeswoman Jen Stutsman said last week that the department is still reviewing applications, but she did not say when a decision will be made.¶ "This is an important multiyear research and development effort, and we want to make sure we take the time during the review process to get the decision right," she wrote in an email.¶ That the grants haven't been given out during a taut campaign season, even as President Obama announces agency actions ranging from trade cases to creating new national monuments to make the case for his re-election, may be a sign that the reactors are ensnared in a broader feud over energy spending.¶ Grant recipients would develop reactor designs with an eye toward eventually turning those into pilot projects -- and the loan guarantees that these first-of-a-kind nuclear plants are using today to get financing would be blocked under the "No More Solyndras" bill that passed the House last week (Greenwire, Sept. 14).

**Winners win – passing foreign policy is key.**

**Marshall & Prins 11** Poli Sci Profs, (September 2011, Bryan W. Marshall --- associate professor of political science at Miami University, Brandon C. Prins --- associate professor of political science at the University of Tennessee, Knoxville, Presidential Studies Quarterly, “Power or Posturing? Policy Availability and Congressional Influence on U.S. Presidential Decisions to Use Force”)

Presidents rely heavily on Congress in converting their political capital into real policy success. Policy success not only shapes the reelection prospects of presidents, but it also builds the president’s reputation for political effectiveness and fuels the prospect for subsequent gains in political capital (Light 1982). Moreover, the president’s legislative success in foreign policy is correlated with success on the domestic front. On this point, some have largely disavowed the two-presidencies distinction while others have even argued that foreign policy has become a mere extension of domestic policy (Fleisher et al. 2000; Oldfield and Wildavsky 1989) Presidents implicitly understand that there exists a linkage between their actions in one policy area and their ability to affect another. The use of force is no exception; in promoting and protecting U.S. interests abroad, presidential decisions are made with an eye toward managing political capital at home (Fordham 2002).

**Political capital theory false—can’t influence agenda**

**Dickinson 9**

(Matthew, professor of political science at Middlebury College, May 26, "Sotomayor, Obama and Presidential Power, "http://blogs.middlebury.edu/presidentialpower/2009/05/26/sotamayor-obama-and-presidential-power/)

What is of more interest to me, however, is what her selection reveals about the basis of presidential power.  **Political scientists**, like baseball writers evaluating hitters, **have devised numerous means of measuring a president’s influence in Congress**.  I will devote a separate post to discussing these, but in brief, they often center on the creation of legislative “box scores” designed to measure how many times a president’s preferred piece of legislation, or nominee to the executive branch or the courts, is approved by Congress.  That is, how many pieces of legislation that the president supports actually pass Congress? How often do members of Congress vote with the president’s preferences?  How often is a president’s policy position supported by roll call outcomes?  **These measures**, however, **are a misleading gauge of presidential power – they are a better indicator of congressional power.**  This is because **how members of Congress vote on a nominee or legislative item is rarely influenced by anything a president does**.  Although journalists (and political scientists) often focus on the legislative “endgame” to gauge presidential influence – will the President swing enough votes to get his preferred legislation enacted? – **this mistakes an outcome with actual evidence of presidential influence.  Once we control for other factors – a member of Congress’ ideological and partisan leanings, the political leanings of** her **constituency,** whether she’s up for **reelection** or not – **we can usually predict how she will vote without needing to know much of anything about what the president wants.**  (I am ignoring the importance of a president’s veto power for the moment.) Despite the much publicized and celebrated instances of presidential arm-twisting during the legislative endgame, then, **most legislative outcomes don’t depend on presidential lobbying**.  But this is not to say that presidents lack influence.  Instead, the primary means by which presidents influence what Congress does is through their ability to determine the alternatives from which Congress must choose.  That is, **presidential power is largely an exercise in agenda-setting** – not arm-twisting.   And we see this in the Sotomayer nomination.  Barring a major scandal, she will almost certainly be confirmed to the Supreme Court whether Obama spends the confirmation hearings calling every Senator or instead spends the next few weeks ignoring the Senate debate in order to play Halo III on his Xbox.  That is, how senators decide to vote on Sotomayor will have almost nothing to do with Obama’s lobbying from here on in (or lack thereof).  His real influence has already occurred, in the decision to present Sotomayor as his nominee.

#### Economic decline doesn’t cause shooting wars

Miller 2k

(Morris, economist, adjunct professor in the University of Ottawa’s Faculty of Administration, consultant on international development issues, former Executive Director and Senior Economist at the World Bank, Winter, Interdisciplinary Science Reviews, Vol. 25, Iss. 4, “Poverty as a cause of wars?” p. Proquest)

The question may be reformulated. Do wars spring from a popular reaction to a sudden economic crisis that exacerbates poverty and growing disparities in wealth and incomes? Perhaps one could argue, as some scholars do, that it is some dramatic event or sequence of such events leading to the exacerbation of poverty that, in turn, leads to this deplorable denouement. This exogenous factor might act as a catalyst for a violent reaction on the part of the people or on the part of the political leadership who would then possibly be tempted to seek a diversion by finding or, if need be, fabricating an enemy and setting in train the process leading to war. According to a study undertaken by Minxin Pei and Ariel Adesnik of the Carnegie Endowment for International Peace, there would not appear to be any merit in this hypothesis. After studying ninety-three episodes of economic crisis in twenty-two countries in Latin America and Asia in the years since the Second World War theyconcluded that:19 Much of the conventional wisdom about the political impact of economic crises may be wrong ... The severity of economic crisis - as measured in terms of inflation and negative growth - bore no relationship to the collapse of regimes ... (or, in democratic states, rarely) **to** an outbreak of violence ... In the cases of dictatorships and semidemocracies, the ruling elites responded to crises by increasing repression (thereby using one form of violence to abort another).

#### No impact – their evidence is political posturing

Taylor Marsh October 25, 2012 “Move to Stop Obama s Bad Lame Duck Entitlement Deal has Already Begun” Lexis

It is known in Washington as the fiscal cliff. But policy and economic analysts projecting its complicated and wide-ranging potential impact said the term fiscal hill or fiscal slope might be more apt: the effect would be powerful but gradual, and in some cases, reversible. The slope would likely be relatively modest at first, Chad Stone, the chief economist at the Center on Budget and Policy Priorities, a research group based in Washington, wrote in a recent analysis. A relatively brief implementation of the tax and spending changes required by current law should cause little short-term damage to the economy as a whole. [...] Moreover, while the fiscal cliff would be enormous in annual terms, its effect would be cumulative, not immediate, analysts have noted. Households hit by the tax increases might not notice the $10 or $100 missing from their paychecks, even if it would damp their spending over the course of the year. Agencies hit by the spending cuts might not act immediately. There is absolutely no need to ram through a fiscal cliff deal before January, but that s what you ll hear. It s timed perfectly with the holidays when people are tuning out, after an election that s exhausted everyone. The gaping maw of economic reality, however, revolves around one irrefutable fact. If we get the economy moving the deficit would not give reason for panic. The goal is to stop a deal in the lame duck. The effort has already begun.

#### DOD energy spending isn’t perceived by the public, even though other government spending is

Reitenach 12

Gail Reitenbach 12, Managing Editor, POWER Magazine, Senior Editor at The McGraw-Hill Companies, 1/1/12, “The U.S. Military Gets Smart Grid,” <http://www.powermag.com/print/smart_grid/The-U-S-Military-Gets-Smart-Grid_4228.html>

The military has an almost perfect set of conditions for developing a variety of advanced, "smart" technologies centered on electricity generation, delivery, and use.¶ Necessity. The DOD is one of the largest energy consumers worldwide and the single largest energy consumer in the U.S. At a White House Energy Security Forum in April 2011, Deputy Defense Secretary William J. Lynn III noted that the DOD accounts for 80% of U.S. federal energy use (and somewhere between 1% and 2% of nationwide consumption), consumes more energy than is used by two-thirds of all the nations on Earth, and has annual energy bills in the tens of billions of dollars ($15 billion in 2010). As in the civilian world, the number of electrically powered devices keeps increasing, so demand tends to rise as well. Consequently, ensuring a reliable supply of energy for both transportation and power can be challenging. ¶ Surety of supply poses challenges for both stationary and FOB installations. According to Lynn, more than 70% of convoys in Afghanistan are used to transport fuel or water and are easy targets for insurgents' roadside bombs. More than 3,000 U.S. troops and contractors had been killed or wounded protecting them as of April 2011. ¶ The desire to keep its people safe—by minimizing the amount of fuel that U.S. forces need to move around in combat zones to fuel electricity generators and vehicles—is a powerful motivating factor for many of the military's smart grid, energy efficiency, and renewable energy initiatives. ¶ Sharon E. Burke, assistant secretary of defense for operational energy plans and programs, told the audience at the Military Smart Grids and Microgrids Conference in October 2011: "When you consider that we move about 50 million gallons of fuel every month right now in Afghanistan, much of which is for power generation, you begin to understand the huge financial cost of this fuel." Burke noted that the fuel powers more than 15,000 generators in Afghanistan alone. She added that better combat power generation has benefits that include less need for fuel, reduced noise and heat signatures, less maintenance, and a lighter force. ¶ Protecting defense-related people, projects, and property at home is also a concern. Remember that DOD facilities are, for the most part, connected to the national grid, making them vulnerable to massive outages like those experienced in 2003 in the Northeast and in 2011 in the Southwest. ¶ Money. Though some Americans may balk at the Department of Energy (DOE) issuing grants and loan guarantees to advance utility smart grid or renewable projects, they are much less aware of the money spent through the Pentagon on similar projects for the military. ¶ For example, Dorothy Robyn, DOD deputy undersecretary for installations and environment, told Defense News on Oct. 31, 2011: "I've been delegated the authority to sign off on renewable projects that go out beyond the 10-year authority that most federal agencies have. We're the only federal agency that has the authority to go out to 30 years. What that does is allow us to do projects that are bigger and have a longer payback period." Robyn also noted that her department can take advantage of third-party financing for renewable and energy efficiency projects.

#### The plan saves the economy.

**Baker et al 7**

(*Howard*, Former Member, United States Senate, Former Chief of Staff for President Ronald Reagan, *Senator J. Bennett Johnston*, Johnston & Associates, Former Member, United States Senate, *Ambassador C. Paul Robinson*, Former Director, Sandia National Laboratories, *Scott L. Campbell*, Senior Public Policy Advisor, Baker Donelson Bearman Caldwell & Berkowitz, PC, Former Director, Office of Policy, Planning and Analysis, U.S. Department of Energy, *Susan Eisenhower*, President, The Eisenhower Group, Inc., *Andrew D. Lundquist*, President, Lundquist Nethercutt and Griles, Former Director, National Energy Policy Development Group, *William F. Martin*, Chairman, Washington Policy & Analysis Inc., Former Deputy Secretary of Energy, *Jerry Oliver*, Chairman, Edison Welding Institute's Nuclear Fabrication Consortium, *Bart R. Olson*, Vice President and General Manager, ATK Tactical Propulsion & Controls, *Dr. Jerry Paul*, Dinstinguished Fellow on Energy Policy, Howard H. Baker Jr. Center for Public Policy, University of Tennessee, *Dr. David B. Prior*, Executive Vice President and Provost, Texas A&M University, *Darrel A. Rice*, Partner, Haynes and Boone LLP, *Dr. John I. Sackett*, Former Associate Laboratory Director for Engineering Research, Argonne National Laboratory, *Dr. Thomas L. Sanders*, Vice President/President-Elect, American Nuclear Society, *Dr. Les E. Shephard*, Vice President, Energy and Infrastructure Assurance, Sandia National Laboratories, *Dr. Alvin W. Trivelpiece*, Former Director, Oak Ridge National Laboratory, Former President, Lockheed Martin Energy Research Corporation, *John C. Tuck*, Senior Public Policy Advisor, *Baker Donelson*, Former Under Secretary of Energy, *John K. Welch*, President and Chief Executive Officer, USEC Inc., *An Assessment of the Economic, Employment, Environmental and Energy Security Benefits of New Nuclear Energy Facility Construction in the USA*, Produced by Oxford Economics for the American Council on Global Nuclear Competitiveness, Above Authors are the Council Members, http://www.nuclearcompetitiveness.org/documents.html)

The ongoing nuclear renaissance offers the promise of spurring new nuclear power plant construction in the United States. **New plant construction**, in turn, could stimulate our heavy manufacturing sector and restore United States leadership in global nuclear energy markets. Many billions of dollars in revenue and hundreds of thousands of high-paying jobs could be created in the United States if American firms capture a large share of the growing United States and global nuclear energy markets. This is not just speculation. The initial wave of commercial nuclear power plant construction, which peaked in the 1970s and 1980s, resulted in more than 400 plants being built across the globe. These plants generate about 16 percent of the world’s electricity without emitting air pollutants or greenhouse gases. United States firms dominated this global market. From reactor design to fuel and component fabrication to plant construction and service, United States firms led the way. The United States also dominated the market for enriched uranium, which was supplied by the United States government’s two enrichment plants. Over the past decade or more, the United States nuclear manufacturing infrastructure has been allowed to atrophy. Yet the renewed, global interest in the use of nuclear energy represents an opportunity for American companies to recapture a large share of the world market for nuclear products and services. American workers can benefit from the restoration of high-paying jobs in reactor design and construction, component fabrication, reactor operation and maintenance, and other fields. Resurgence in the construction of nuclear power plants could also have important environmental and national security benefits for the United States. Nuclear power plant operations do not result in carbon emissions, so U.S. greenhouse gas emissions could be reduced substantially by displacing coal and natural gas-fired electricity with nuclear power. Nuclear energy can also contribute to our nation’s effort to reduce oil imports and thus increase our national security. The public debate over the expanded use of nuclear energy has, until now, not included a realistic estimate of these potential economic, environmental and national security benefits. The American Council on Global Nuclear Competitiveness arranged for the economic modeling experts at Oxford Economics to prepare the attached analysis to help quantify the benefits that could accrue if the United States were to engage in a new wave of nuclear energy infrastructure construction. In conducting the evaluation, the market for new nuclear energy products and services was considered in two major segments. The first is for the design, construction and operation of new nuclear power reactors. The next few years could see the construction of several new, large light water reactors in the United States. This is the type of reactor used in most of the world’s nuclear power plants. Plans have already been announced to build more than 30 of these reactors in the U.S. starting in the next ten years. In the analysis, Oxford Economics and the Council have assumed that fifty of these plants will be in operation or under construction by 2030. By about the year 2020, these large light water reactors could be joined by so-called Generation IV reactors such as high-temperature gas-cooled reactors and fast spectrum reactors. Compared with today’s reactors, High Temperature Gas Cooled Reactors (HTGRs) offer a high degree of versatility due to their higher outlet temperatures. Their ability to serve as a high temperature heat source for hydrogen or synthetic fuel production should be appealing to many nations seeking to reduce their reliance on oil imports. In addition, their robust fuel cladding contributes to their excellent safety and security characteristics. Fast spectrum reactors are needed to efficiently use recycled nuclear fuel from today’s reactors and thus capture the full benefits of the coming fuel recycling system. Both HTGRs and fast-spectrum reactors are not yet in widespread commercial use, so a system of suppliers will have to be created to provide the needed materials and components. In the analysis, Oxford Economics and the Council have assumed that 20 HTGRs and 12 fast spectrum reactors will be in operation or under construction by 2030; if Generation IV reactors are not ready for wide-scale deployment in the next two decades, additional advanced light-water reactors could be constructed and would result in essentially the same level of benefits. The second market segment is the design, construction and operation of fuel cycle facilities, particularly those for the enrichment of uranium and for the recycle of used fuel. New fuel cycle facilities will have to be constructed in the United States and abroad to support a wide-spread expansion of nuclear energy. In the analysis, Oxford Economics and the Council have assumed that three nuclear fuel recycling facilities (each with 1200 metrics tons/year of recycle capacity) will be in operation in the U.S. by 2030. The Oxford Economics report draws from several studies and sources to provide an integrated estimate of the economic and employment benefits that could accrue if the United States were to capture large shares of these three market segments. The report is intended to provide estimates that can help inform the public debate over investment incentives, research funding, or other policies that would assist in the restoration of American leadership in the global nuclear energy market. Based on the **studies and sources** cited in the Oxford Economics report, they have estimated that the construction of light-water reactors, high-temperature gas reactors, fast-spectrum reactors and used fuel recycle facilities in the United States could result in the generation of: • More than 75,000 manufacturing jobs; • Upwards of 100,000 construction and operations jobs; • More than 100,000 indirect jobs related to the nuclear power industry; and • Another 150,000 induced jobs in non-nuclear industries throughout the country. All told, the rebirth of a robust nuclear construction manufacturing industry in the United States could result in the creation of more than 400,000 jobs.

 This figure could – and almost certainly would – be even higher as rejuvenated United States firms secured contracts to supply American-made nuclear and products and services across the globe. The construction value alone of these new nuclear facilities would be more than $100 billion. The retail value of the electricity produced by the new reactors would be more than $30 billion ¶ dollars per year. The electricity produced would avoid the emission of 430 million tons (390 million metric tons) of carbon per year by 2030 and would reduce oil imports by $41 billion per year. If **no new nuclear reactors** are constructed in the United States, the United States will not accrue many of these economic benefits. We will also find ourselves increasing our trade deficit and weakening our international nuclear policy and non-proliferation position by allowing other nations to be the predominant nuclear suppliers to the world. A restoration of American leadership in nuclear energy is clearly in the economic interests of our country. We urge our nation’s political, industry, financial, and labor leaders to adapt and support policies and programs that will help ensure America’s nuclear leadership is restored.

## 1AR

### Water

#### Thousands of years of data prove our argument

Glecik 9

<http://seedmagazine.com/content/article/the_truth_about_water_wars/> Peter Gleick is co-founder and president of the Pacific Institute in Oakland, California, and a member of the World Economic Forum Global Agenda Council on Water Security and the UN’s Expert Group on Policy Relevance of the World Water Assessment Program. He is editor of the biennial book The World’s Water and has recently begun blogging at Water By the Numbers.

 Far more important, and far easier to answer, is the question: Is there any connection between fresh water and conflict, including violent conflict? And the answer has to be an unambiguous “yes.” History going back 5,000 years is rife with examples where water has been a goal of violence, a target or tool of conflict, or a source of disputes and political strife. Our Water Conflict Chronology, at worldwater.org, lists hundreds of these examples. And if there is a strong connection between water and conflicts, two new questions come up: Are the risks of these conflicts growing, and how can we reduce them? I think the answer to the first is, yes, the risks of water-related conflicts appears to be growing.

### BER CP

#### Perm do the cp

**T Resolved means by vote**

Webster’s Revised Unabridged Dictionary, 1998 (dictionary.com)

Resolved:

5. To express, as an opinion or determination, by resolution and vote; to declare or decide by a formal vote; -- followed by a clause; as, the house resolved (or, it was resolved by the house) that no money should be apropriated (or, to appropriate no money).

**Also, the colon is meaningless –**

Webster’s Guide to Grammar and Writing – 2k (<http://ccc.commnet.edu/grammar/marks/colon.htm>)

Use of a colon before a list or an explanation that is preceded by a clause that can stand by itself. Think of the colon as a gate, inviting one to go on… If the introductory phrase preceding the colon is very brief and the clause following the colon represents the real business of the sentence, begin the clause after the colon with a capital letter.

**Should means desirable or recommended, not mandatory**

Words and Phrases, 2002 (“Words and Phrases: Permanent Edition” Vol. 39 Set to Signed. Pub. By Thomson West. P. 372-373)

Or. 1952. Where safety regulation for sawmill industry providing that a two by two inch guard rail should be installed at extreme outer edge of walkways adjacent to sorting tables was immediately preceded by other regulations in which word “shall” instead of “should” was used, and word “should” did not appear to be result of inadvertent use in particular regulation, use of word “should” was intended to convey idea that particular precaution involved was desirable and recommended, but not mandatory. ORS 654.005 et seq.----Baldassarre v. West Oregon Lumber Co., 239 P.2d 839, 193 Or. 556.---Labor & Emp. 2857

And USFG not single entity

Chicago Manual of Style, ‘3

(http://www.chicagomanualofstyle.org/CMS\_FAQ/CapitalizationTitles/CapitalizationTitles32.html, accessed 10/16/07)

The government of the United States **is not a single official entity**. Nor is it when it is referred to as the federal government or the U.S. government or the U.S. federal government. It’s just a government, which, like those in all countries, has some official bodies that act and operate in the name of government: the Congress, the Senate, the Department of State, etc.

**New args about what USFG means justifies Perm do the counterplan and do the plan regardless of the outcome. If they say yes, nothing happens. If they say no, case is a disad because acting now is key to check china- that’s wheeler. Timeframe perm is justified because the counterplan introduces the element.**

#### Perm is a re-clarification of the aff

### FISCAL CLIFF

### 1AR No Pass

#### Obama will spend PC on tax hikes- means Boehner wont back down

Sherwood 11/10/12

I-Hsei http://www.latinospost.com/articles/6751/20121110/fiscal-cliff-2013-looms-obama-insists-tax.htm

After a resounding victory in Tuesday's election, President Obama is spending some of his political capital, [standing his ground](http://www.nytimes.com/2012/11/10/us/politics/obama-and-boehner-circle-each-other-on-budget-impasse.html?pagewanted=all) on one of his most notable campaign promises.¶ "If we're serious about reducing the deficit, we have to combine spending cuts with revenue -and that means asking the wealthiest Americans to pay a little more in taxes," [said Obama in his first weekly address](http://www.slate.com/blogs/the_slatest/2012/11/10/obama_insits_on_tax_hike_for_rich_on_fiscal_cliff_deal.html) since the election. "I will not ask students or seniors or middle-class families to pay down the entire deficit while people making over $250,000 aren't asked to pay a dime more in taxes," he continued.¶ One of the key differences between the economic plans of Obama and Republican challenger Mitt Romney was their tax plans. Obama wants to [repeal the Bush-era tax cuts on high-income taxpayers](http://www.boston.com/news/politics/2012/11/10/obama-compromise-but-not-tax-cuts-for-rich/WO30HJpWA3Ydu4yauwHI0K/story.html), while Romney wanted to cut taxes across the board, regardless of income.Even with Romney out of the picture, Obama may still not get his way, as congressional Republicans were just as obstinate over the issue last year, leading to the compromise now known as the "fiscal cliff," a year-end deadline that sees all tax rates rise and slashes spending indiscriminately on nearly all government programs, including education and the military, unless the two parties can come to some kind of budgetary agreement.But Republican House Speaker John Boehner, who has been somewhat conciliatory since the election, seems to be [digging in his heels](http://politicalticker.blogs.cnn.com/2012/11/10/obama-boehner-stand-ground-on-fiscal-cliff/) when it come to raising taxes on upper-income Americans. "Here's the problem with that," [said Boehner](http://www.cbsnews.com/8301-34222_162-57548085/obama-holds-onto-revenue-caveat-in-averting-fiscal-cliff/). "Raising those rates on January 1 would, according to the independent firm Ernst & Young, destroy 700,000 American jobs. That's because many of those hit by this tax increase are small business owners - the very people who are the key to job creation in America. I used to be one of them."

.

#### No bipart deal now

Leonhardt 11/10/2012

(David, David Leonhardt is the Washington bureau chief of The New York Times. “The Cliff Is a Hard Place to Compromise” <http://www.nytimes.com/2012/11/11/sunday-review/the-cliff-is-a-hard-place-to-compromise.html> - Kurr)

For now, Republicans have signaled some openness to accepting higher taxes. But they and the Democrats remain far apart, on both the overall size and the composition of a tax agreement. (Republicans say they will accept only the closing of loopholes, not the higher rates that would come from the expiration of the Bush tax cuts on upper income.)¶ Given the administration’s repeated failure to win over Republicans in its first term, Obama advisers have been talking for weeks about whether he could stand firm and allow the scheduled changes to take effect on Jan. 1. Doing so might hurt a still-vulnerable economy, by leaving consumers with less money and reducing government spending. The reaction from markets may aggravate the situation.¶ But going over the so-called cliff also has the potential to be less bad than feared. It would be a slow accumulation of economic changes and not entirely unexpected, which is very different from defaulting on the country’s debt payments, as nearly happened during the 2011 debt-ceiling talks. Democrats have begun making this point more loudly, in part to send the message that they are willing to accept the scheduled budget changes if need be.¶ “For the president to have any leverage, he has to make the Republicans believe he is willing to let the tax cuts expire,” said James R. Horney of the Center on Budget and Policy Priorities, which has close ties to the White House and Congressional Democrats. “The only way, I suspect, that he can convince them he is willing to let that happen is to actually let it happen.”¶ Republicans, having absorbed defeat and seen the polls showing that Americans consider their party less willing to compromise than Mr. Obama, may well decide to do so before Jan. 1. House leaders spoke of compromise last week. But betting on an unexpectedly smooth bipartisan deal generally hasn’t been the smart move lately.

### 1AR Plan Popular

#### That outweighs their links

Squassoni ‘12

[Sharon Squassoni serves as director and senior fellow of the Proliferation Prevention Program at CSIS. Prior to joining CSIS, Ms. Squassoni was a senior associate in the Nuclear Nonproliferation Program at the Carnegie Endowment for International Peace. From 2002-2007, Ms. Squassoni advised Congress as a senior specialist in weapons of mass destruction at the Congressional Research Service. “The Future of Nuclear Power in the US.” Federation of American Scientists, February 2012. ETB]

Concerns about contamination of the soil and water by radioactivity lay relatively dormant in recent years because of the strong support of the U.S. government for nuclear power and the portrayal of nuclear energy as “clean, green and secure.” Marketing campaigns by the Nuclear Energy Institute (NEI) portraying nuclear energy as “clean air” energy and by the NEI-funded the Clean and Safe Energy Coalition were likely influential.16 On the whole, opponents of nuclear energy generally have had less money to spend on media campaigns, and their message is less pithy. ey have stressed that nuclear power is not the solution to climate change and that it is dangerous, polluting, unsafe, and expensive. The accident at Fukushima returned safety and waste concerns to headline news. Shortly after the accident, a Gallup poll showed 44 percent of the public in favor (in contrast to 59 percent the previous year) and 47 percent opposing nuclear power.17 Figure 6 below shows the results of a Pew Research Center poll conducted about a week after Fukushima.18

### 1AR Pol Cap Not Key

#### 8% chance of the internal link – their author

Beckmann and Kumar 11

Matthew N Beckmann and Vimal Kumar 11, Associate Professor of Political Science at UC Irvine, econ prof at the Indian Institute of Tech, “Opportunism in Polarization”, Presidential Studies Quarterly; Sep 2011; 41, 3

The final important piece in our theoretical model—presidents' political capital— also finds support in these analyses, though the results here are less reliable. Presidents operating under the specter of strong economy and high approval ratings get an important, albeit moderate, increase in their chances for prevailing on "key" Senate roll-call votes (b = .10, se = .06, p < .10). Figure 4 displays the substantive implications of these results in the context of polarization, showing that going from the lower third of political capital to the upper third increases presidents' chances for success by 8 percentage points (in a setting like 2008). Thus, political capital's impact does provide an important boost to presidents' success on Capitol Hill, but it is certainly not potent enough to overcome basic congressional realities. Political capital is just strong enough to put a presidential thumb on the congressional scales, which often will not matter, but can in close cases.

### 1AR DOD Shields

#### Can’t capitalize---plan spun as a pro-troop measure

Merchant, 10

(Political & Environment Columnist-Discovery, 10/21, “How the US Military Could Bring Solar Power to Mass Market,” http://www.treehugger.com/corporate-responsibility/how-the-us-military-could-bring-solar-power-to-mass-market.html)

Furthermore, Congress is infinitely more likely to approve funding for R&D; and infrastructure if the projects are military-related. Which is depressing, but true -- the one thing that no politician can get caught opposing is the safety of American troops. In fact, the whole premise of the article is rather depressing, on point though it may be: The only way we may end up getting a competitive clean energy industry is through serious military investment, which is of course, serious government spending. Which under any other guise would be vehemently opposed by conservatives.

### 1AR No Impact

**No impact to sequestration still dominate spending**

**Dickinson 9-5**

Matthew has a Ph. D in Political Science from Harvard, is a Professor of Political Science and writes for the Economist, “Who will Make the Case for Serious Cuts,” <http://www.economist.com/blogs/democracyinamerica/2012/09/defence-spending?fsrc=gn_ep>

AS I mentioned in last night's live-blog, **if sequestration comes to pass**, Barack **Obama will have to make do with a defence budget** roughly **equivalent** (in real terms) **to** George **Bush's outlay for 2007.** That budget surpasses average annual military spending during the cold war. In other words, **even with sequestration, America will still be in pretty good shape militarily. It will still spend as much as all of the other big militaries combined. It will still hold an immense advantage over China and the rest of Asia,** where the Obama administration is focusing its resources, and Russia, which Mitt Romney thinks is America's greatest foe.