# Round 1 v Houston

## 1AC

### Plan

**The United States federal government should obtain, through alternative financing, electricity from small modular reactors for military bases in the United States.**

### Grid Adv

**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 U**nited **S**tates **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 U**nited **S**tates **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 U**nited **S**tates 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 U**nited **S**tates, **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 executedthese 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.\

**Grid will go down for months - multiple scenarios**

**Slavo ‘12**

(Mac is editor of shftplan, “UPDATE: Cascading Grid Crash: Now 600 Million Without Power in India (Are We Vulnerable?)” <http://www.shtfplan.com/headline-news/paralysis-grid-down-in-india-370-million-left-without-power_07302012>, SEH)

**The power grid in the United States**, while more advanced and apparently better maintained, **is** also **under excessive strain as has been witnessed in recent years with rolling brownouts, blackouts, and unforeseen crashes** resulting from key component failure.¶ **One industry insider** who has worked in the utility industry for nearly two decades **advised** this author recently **that it wouldn’t take much to bring down the system even in the United States**, potentially affecting tens of millions of customers. Though it’s the 21st century, many grid components in operation are, in some cases, as much as 40 years old, thus replacement parts are almost impossible to find. Other components, like massive transformers may take weeks or months to replace. In the event of a scenario where multiple components are targeted simultaneously, by either a man-made EMP or natural event, it is not too far of a stretch to suggest that the afflicted regions would be engulfed in pandemonium.¶ **This potential for widespread failure is so plausible that former Congressman** Roscoe Bartlett, **who has spoken on the vulnerabilities of the US power grid, has advised that Those Who Can, Should Move Their Families Out Of the City**:¶ After Hurricane Ike passed through the Houston area 2008 some 90% of the metropolitan was without power. While hospitals, police and critical infrastructure was restored within a few days, residents in outlying suburban areas experienced the outage for over three weeks. We witnessed the rapid loss of patience, increased anxiety and frustration, and the subsequent breakdown of interpersonal interaction at high-demand venues such as gas stations, where long lines, screaming matches and even fist fights became a common occurrence.¶ **The bottom line: As demonstrated in India today**, Quebec in 1989 (caused by a geo-magnetic storm originating from the sun), Ike in 2008, Hurricane Irene on the East coast in 2012 and the plethora of incidents that have taken place over the last couple of decades, **the North American power grid,** just as India’s, **is susceptible to far-from-equilibrium situations, and sometimes it takes extended periods of time to get power up and running**.¶ **With just three major grids running the United States**, **our dependence on massive flows of electricity to power** our home air conditioners, food refrigeration, communications, water and gas pump systems, and daily business operations **could come to a screeching halt should the grid ever be struck by a natural disaster like a** solar coronal mass ejection or **a large-scale earthquake** in California or on the Madrid fault. Likewise, as we’ve noted previously, **rogue organizations looking to wreak havoc have already demonstrated the staggering security holes in our power**, water and oil **grid infrastructure, with leading cyber security firms noting that it is just a matter of time before disaster strikes.**¶ While a short-term, isolated metropolitan outage can be dealt with by sourcing labor and supplies from unaffected areas of the country, **considering that the US operates on three key power grid systems, a region-wide outage affecting just one of these nodes could lead to a cascading breakdown in the electrical power system that envelops the entire country**.¶ **The most dangerous possibility emerges when we look at threats posed by** the sun or **a rogue terror cell or** nation that could deploy **an** Electro-Magnetic Pulse weapon (**EMP /** Super EMP) over American skies**. It’s been surmised that** either one of **these** possibilities **could cause damage so staggering that the grid would be down for months,** leaving millions without just-in-time food and gas delivery systems, medical care, local emergency response, or even clean water. According to one estimate, some 90% of Americans would die in such a scenario if the power wasn’t restored within one year.¶ Thus, it is clear that our power grids are a critical lifeline to keeping life as we know it in the world today operational. And, as we have seen historically and India this morning, power grids can and do crash – even in countries with hundreds of millions of residents.

**Cyber-attack is coming ---actors are probing 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.

#### SMRs solve – makes bases resilient and deters attacks – alternatives 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)

Small Reactors and Energy Security¶ The DOD interest in small reactors derives largely from problems with base and logistics vulnerability. Over the last few years, the Services have begun to reexamine virtually every aspect of how they generate and use energy with an eye toward cutting costs, decreasing carbon emissions, and reducing energy-related vulnerabilities. These actions have resulted in programs that have significantly reduced DOD energy consumption and greenhouse gas emissions at domestic bases. Despite strong efforts, however, two critical security issues have thus far **proven resistant to existing solutions**: bases’ vulnerability to civilian power outages, and the need to transport large quantities of fuel via convoys through hostile territory to forward locations. Each of these is explored below.¶ 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 the vast 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.

**Microgrid exacerbates vulnerability**

**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**.

**Grid attacks take out command and control – causes relation and nuclear war**

**Tilford 12**

Robert, Graduate US Army Airborne School, Ft. Benning, Georgia, “Cyber attackers could shut down the electric grid for the entire east coast” 2012, <http://www.examiner.com/article/cyber-attackers-could-easily-shut-down-the-electric-grid-for-the-entire-east-coa>

To make matters worse **a cyber attack that can take out a civilian power grid, for example could also cripple the U.S. military.**¶ The senator notes that is that the same power grids that supply cities and towns, stores and gas stations, cell towers and heart monitors also power “every military base in our country.”¶ “Although bases would be prepared to weather a short power outage with **backup diesel generators, within hours, not days, fuel supplies would run out”**, he said.¶ Which means military **command and control centers could go dark**.¶ **Radar systems that detect air threats** to our country **would shut Down completely**.¶ “**Communication between commanders and their troops would also go silent. And many weapons systems would be left without either fuel or electric power”,** said Senator Grassley.¶ “**So in a few short hours or days, the mightiest military in the world would be left scrambling to maintain base functions**”, he said.¶ We contacted the Pentagon and officials confirmed the threat of a cyber attack is something very real.¶ Top national security officials—including the Chairman of the Joint Chiefs, the Director of the National Security Agency, **the Secretary of Defense, and the CIA Director— have said, “preventing a cyber attack and improving the nation’s electric grids is among the most urgent priorities of our country”** (source: Congressional Record).¶ So how serious is the Pentagon taking all this?¶ Enough to start, or end a war over it, for sure (see video: Pentagon declares war on cyber attacks http://www.youtube.com/watch?v=\_kVQrp\_D0kY&feature=relmfu ).¶ **A cyber attack today against the US could very well be seen as an “Act of War” and could be met with a “full scale” US military response.**¶ That could include the use **of “nuclear weapons**”, if authorized by the President.

**Grid failure wrecks US critical mission operations**

**Stockton 11** Paul, assistant secretary of defense for Homeland Defense and Americas’ Security Affairs, “Ten Years After 9/11: Challenges for the Decade to Come”, <http://www.hsaj.org/?fullarticle=7.2.11>

The cyber threat to the DIB is only part of a much larger challenge to DoD. Potential adversaries are seeking asymmetric means to cripple our force projection, warfighting, and sustainment capabilities, by targeting the critical civilian and defense supporting assets (within the United States and abroad) on which our forces depend. This challenge is not limited to man-made threats; DoD must also execute its mission-essential functions in the face of disruptions caused by naturally occurring hazards.20 Threats and hazards to DoD mission execution include incidents such as earthquakes, naturally occurring pandemics, solar weather events, and industrial accidents, as well as kinetic or virtual attacks by state or non-state actors. Threats can also emanate from insiders with ties to foreign counterintelligence organizations, homegrown terrorists, or individuals with a malicious agenda. From a DoD perspective, this global convergence of unprecedented threats and hazards, and vulnerabilities and consequences, is a particularly problematic reality of the post-Cold War world. Successfully deploying and sustaining our military forces are increasingly a function of interdependent supply chains and privately owned infrastructure within the United States and abroad, including transportation networks, cyber systems, commercial corridors, communications pathways, and energy grids. This infrastructure largely falls outside DoD direct control. Adversary actions to destroy, disrupt, or manipulate this highly vulnerable homeland- and foreign-based infrastructure may be relatively easy to achieve and extremely tough to counter. Attacking such “soft,” diffuse infrastructure systems could significantly affect our military forces globally – potentially blinding them, neutering their command and control, degrading their mobility, and isolating them from their principal sources of logistics support. The Defense Critical Infrastructure Program (DCIP) under Mission Assurance seeks to improve execution of DoD assigned missions to make them more resilient. This is accomplished through the assessment of the supporting commercial infrastructure relied upon by key nodes during execution. By building resilience into the system and ensuring this support is well maintained, DoD aims to ensure it can "take a punch as well as deliver one."21 It also provides the department the means to prioritize investments across all DoD components and assigned missions to the most critical issues faced by the department through the use of risk decision packages (RDP).22 The commercial power supply on which DoD depends exemplifies both the novel challenges we face and the great progress we are making with other federal agencies and the private sector. Today’s commercial electric power grid has a great deal of resilience against the sort of disruptive events that have traditionally been factored into the grid’s design. Yet, the grid will increasingly confront threats beyond that traditional design basis. This complex risk environment includes: disruptive or deliberate attacks, either physical or cyber in nature; severe natural hazards such as geomagnetic storms and natural disasters with cascading regional and national impacts (as in NLE 11); long supply chain lead times for key replacement electric power equipment; transition to automated control systems and other smart grid technologies without robust security; and more frequent interruptions in fuel supplies to electricity-generating plants. These risks are magnified by globalization, urbanization, and the highly interconnected nature of people, economies, information, and infrastructure systems. The department is highly dependent on commercial power grids and energy sources. As the largest consumer of energy in the United States, DoD is dependent on commercial electricity sources outside its ownership and control for secure, uninterrupted power to support critical missions. In fact, approximately 99 percent of the electricity consumed by DoD facilities originates offsite, while approximately 85 percent of critical electricity infrastructure itself is commercially owned. This situation only underscores the importance of our partnership with DHS and its work to protect the nation’s critical infrastructure – a mission that serves not only the national defense but also the larger national purpose of sustaining our economic health and competitiveness. DoD has traditionally assumed that the commercial grid will be subject only to infrequent, weather-related, and short-term disruptions, and that available backup power is sufficient to meet critical mission needs. As noted in the February 2008 Report of the Defense Science Board Task Force on DoD Energy Strategy, “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.”23 Similarly, a 2009 GAO Report on Actions Needed to Improve the Identification and Management of Electrical Power Risks and Vulnerabilities to DoD Critical Assets stated that DoD mission-critical assets rely primarily on commercial electric power and are vulnerable to disruptions in electric power supplies.24 Moreover, these vulnerabilities may cascade into other critical infrastructure that uses the grid – communications, water, transportation, and pipelines – that, in turn, is needed for the normal operation of the grid, as well as its quick recovery in emergency situations. To remedy this situation, the Defense Science Board (DSB) Task Force recommended that DoD take a broad-based approach, including a focused analysis of critical functions and supporting assets, a more realistic assessment of electricity outage cause and duration, and an integrated approach to risk management that includes greater efficiency, renewable resources, distributed generation, and increased reliability. DoD Mission Assurance is designed to carry forward the DSB recommendations. Yet, for a variety of reasons – technical, financial, regulatory, and legal – DoD has limited ability to manage electrical power demand and supply on its installations. As noted above, DHS is the lead agency for critical infrastructure protection by law and pursuant to Homeland Security Presidential Directive 7. The Department of Energy (DOE) is the lead agency on energy matters. And within DoD, energy and energy security roles and responsibilities are distributed and shared, with different entities managing security against physical, nuclear, and cyber threats; cost and regulatory compliance; and the response to natural disasters. And of course, production and delivery of electric power to most DoD installations are controlled by commercial entities that are regulated by state and local utility commissions. The resulting paradox: DoD is dependent on a commercial power system over which it does not – and never will – exercise control.

**Loss of mission effectiveness causes nuclear war in every hotspot**

**Kagan and O’Hanlon 7** Frederick, resident scholar at AEI and Michael, senior fellow in foreign policy at Brookings, “The Case for Larger Ground Forces”, April 2007, http://www.aei.org/files/2007/04/24/20070424\_Kagan20070424.pdf

We live at a time when wars not only rage in nearly every region but threaten to erupt in many places where the current relative calm is tenuous. To view this as a strategic military challenge for the United States is not to espouse a specific theory of America’s role in the world or a certain political philosophy. Such an assessment flows directly from the basic bipartisan view of American foreign policy makers since World War II that overseas threats must be countered before they can directly threaten this country’s shores, that the basic stability of the international system is essential to American peace and prosperity, and that no country besides the United States is in a position to lead the way in countering major challenges to the global order. Let us highlight the threats and their consequences with a few concrete examples, emphasizing those that involve key strategic regions of the world such as the Persian Gulf and East Asia, or key potential threats to American security, such as the spread of nuclear weapons and the strengthening of the global Al Qaeda/jihadist movement. The Iranian government has rejected a series of international demands to halt its efforts at enriching uranium and submit to international inspections. What will happen if the US—or Israeli—government becomes convinced that Tehran is on the verge of fielding a nuclear weapon? North Korea, of course, has already done so, and the ripple effects are beginning to spread. Japan’s recent election to supreme power of a leader who has promised to rewrite that country’s constitution to support increased armed forces—and, possibly, even nuclear weapons— may well alter the delicate balance of fear in Northeast Asia fundamentally and rapidly. Also, in the background, at least for now, Sino Taiwanese tensions continue to flare, as do tensions between India and Pakistan, Pakistan and Afghanistan, Venezuela and the United States, and so on. Meanwhile, the world’s nonintervention in Darfur troubles consciences from Europe to America’s Bible Belt to its bastions of liberalism, yet with no serious international forces on offer, the bloodletting will probably, tragically, continue unabated. And as bad as things are in Iraq today, they could get worse. What would happen if the key Shiite figure, Ali al Sistani, were to die? If another major attack on the scale of the Golden Mosque bombing hit either side (or, perhaps, both sides at the same time)? Such deterioration might convince many Americans that the war there truly was lost—but the costs of reaching such a conclusion would be enormous. Afghanistan is somewhat more stable for the moment, although a major Taliban offensive appears to be in the offing. Sound US grand strategy must proceed from the recognition that, over the next few years and decades, the world is going to be a very unsettled and quite dangerous place, with Al Qaeda and its associated groups as a subset of a much larger set of worries. The only serious response to this international environment is to develop armed forces capable of protecting America’s vital interests throughout this dangerous time**. Doing so requires a military capable of a wide range of missions**—including not only deterrence of great power conflict in dealing with potential hotspots in Korea, the Taiwan Strait, and the Persian Gulf but also associated with a variety of Special Forces activities and stabilization operations. For today’s US military, which already excels at high technology and is increasingly focused on re-learning the lost art of counterinsurgency, this is first and foremost a question of finding the resources to field a large-enough standing Army and Marine Corps to handle personnel intensive missions such as the ones now under way in Iraq and Afghanistan. Let us hope there will be no such large-scale missions for a while. But preparing for the possibility, while doing whatever we can at this late hour to relieve the pressure on our soldiers and **Marines** in ongoing operations, is prudent. At worst, the only potential downside to a major program to strengthen the military is the possibility of spending a bit too much money. **Recent history shows no link between having a larger military and its overuse**; indeed, Ronald Reagan’s time in office was characterized by higher defense budgets and yet much less use of the military, an outcome for which we can hope in the coming years, but hardly guarantee. While the authors disagree between ourselves about proper increases in the size and cost of the military (with O’Hanlon preferring to hold defense to roughly 4 percent of GDP and seeing ground forces increase by a total of perhaps 100,000, and Kagan willing to devote at least 5 percent of GDP to defense as in the Reagan years and increase the Army by at least 250,000), we agree on the need to start expanding ground force capabilities by at least 25,000 a year immediately. Such a measure is not only prudent, it is also badly overdue.

**We control empirics**

**Wohlforth 8—**Daniel Webster Professor of Government, Dartmouth. BA in IR, MA in IR and MPhil and PhD in pol sci, Yale (William, Unipolarity, Status Competition, and Great Power War, October 2008, World Politics Vol. 61, Iss. 1; pg. 28, 31 pgs, Proquest)

Despite increasingly compelling findings concerning the importance of status seeking in human behavior, research on its connection to war waned some three decades ago.38 Yet empirical studies of the relationship between both systemic and dyadic capabilities distributions and war have continued to cumulate. If the relationships implied by the status theory run afoul of well-established patterns or general historical findings, then there is little reason to continue investigating them. **The clearest empirical implication** of the theory **is that** status **competition is unlikely to cause great power military conflict in unipolar systems**. If status competition is an important contributory cause of great power war, then, ceteris paribus, unipolar systems should be markedly less war-prone than bipolar or multipolar systems. And this appears to be the case. As Daniel Geller notes in a review of the empirical literature: "**The only polar structure that appears to influence conflict probability is unipolarity**."39 In addition, a larger number of studies at the dyadic level support the related expectation that narrow capabilities gaps and ambiguous or unstable capabilities hierarchies increase the probability of war.40 These studies are based entirely on post-sixteenth-century European history, and most are limited to the post-1815 period covered by the standard data sets. Though the systems coded as unipolar, near-unipolar, and hegemonic are all marked by a high concentration of capabilities in a single state, these studies operationalize unipolarity in a variety of ways, often very differently from the definition adopted here. An ongoing collaborative project looking at ancient interstate systems over the course of two thousand years suggests that historical systems that come closest to the definition of unipolarity used here exhibit precisely the behavioral properties implied by the theory. 41 As David C. Kang's research shows, the East Asian system between 1300 and 1900 was an unusually stratified unipolar structure, with an economic and militarily dominant China interacting with a small number of geographically proximate, clearly weaker East Asian states.42 Status politics existed, but actors were channeled by elaborate cultural understandings and interstate practices into clearly recognized ranks. Warfare was exceedingly rare, and the major outbreaks occurred precisely when the theory would predict: when China's capabilities waned, reducing the clarity of the underlying material hierarchy and increasing status dissonance for lesser powers. Much more research is needed, but initial exploration of other arguably unipolar systems-for example, Rome, Assyria, the Amarna system-appears consistent with the hypothesis.43 Status Competition and Causal Mechanisms Both theory and evidence demonstrate convincingly that competition for status is a driver of human behavior, and social identity theory and related literatures suggest the conditions under which it might come to the fore in great power relations. Both the systemic and dyadic findings presented in large-N studies are broadly consistent with the theory, but they are also consistent with power transition and other rationalist theories of hegemonic war.

**Hegemonic strategy inevitable- the only question is efficacy**

**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.

**No offense – fast collapse causes lash-out**

**Goldstein ‘07**

(Avery, Professor of Global Politics and International Relations @ University of Pennsylvania, “Power transitions, institutions, and China's rise in East Asia: Theoretical expectations and evidence,” Journal of Strategic Studies, Volume 30, Issue 4 & 5 August)

Two closely related, though distinct, theoretical arguments focus explicitly on the consequences for international politics of a shift in power between a dominant state and a rising power. In War and Change in World Politics, Robert Gilpin suggested that **peace prevails when a dominant state’s capabilities enable it to ‘govern’** an international order that it has shaped. Over time, however, **as** economic and technological diffusion proceeds during eras of peace and development, **other states are empowered**. Moreover, the burdens of international governance drain and distract the reigning hegemon, **and challengers** eventually **emerge** who seek to rewrite the rules of governance. As the power advantage of the erstwhile hegemon ebbs, **it may become desperate enough to resort to** the ultima ratio of international politics, **force, to forestall the increasingly urgent demands of a rising challenger**. Or as the power of the challenger rises, it may be tempted to press its case with threats to use force. It is **the** rise and **fall of** the **great powers** that **creates** the circumstances under which major wars, what Gilpin labels ‘**hegemonic wars’**, break out.13 Gilpin’s argument logically encourages pessimism about the implications of a rising China. It leads to the expectation that international trade, investment, and technology transfer will result in a steady diffusion of American economic power, benefiting the rapidly developing states of the world, including China. As the US simultaneously scurries to put out the many brushfires that threaten its far-flung global interests (i.e., the classic problem of overextension), it will be unable to devote sufficient resources to maintain or restore its former advantage over emerging competitors like China. **While the erosion of the once clear American advantage plays itself out, the US will find it ever more difficult to preserve** the **order** in Asia that it created during its era of preponderance. The expectation is an increase in the likelihood for the use of force – either by a Chinese challenger able to field a stronger military in support of its demands for greater influence over international arrangements in Asia, or by a besieged American hegemon desperate to head off further decline. Among the trends that alarm those who would look at Asia through the lens of Gilpin’s theory are **China’s expanding share of** world trade and **wealth** (much of it resulting from the gains made possible by the international economic order a dominant US established); its **acquisition of technology in key sectors that have** both civilian and **military applications** (e.g., information, communications, and electronics linked with the ‘revolution in military affairs’); **and** an **expanding military burden for the US** (as it copes with the challenges of its global war on terrorism and especially its struggle in Iraq) that limits the resources it can devote to preserving its interests in East Asia.14 Although similar to Gilpin’s work insofar as it emphasizes the importance of shifts in the capabilities of a dominant state and a rising challenger, the power-transition theory A. F. K. Organski and Jacek Kugler present in The War Ledger focuses more closely on the allegedly dangerous phenomenon of ‘crossover’– the point at which a dissatisfied challenger is about to overtake the established leading state.15 In such cases, **when the power gap narrows, the dominant state becomes increasingly desperate to forestall, and the challenger becomes increasingly determined to realize the transition to a new international order whose contours it will define.** Though suggesting why a rising China may ultimately present grave dangers for international peace when its capabilities make it a peer competitor of America, Organski and Kugler’s power-transition theory is less clear about the dangers while a potential challenger still lags far behind and faces a difficult struggle to catch up. This clarification is important in thinking about the theory’s relevance to interpreting China’s rise because **a broad consensus prevails** among analysts **that Chinese military capabilities are at a minimum two decades from putting it in a league with the US** in Asia.16 Their **theory**, then, **points with alarm to trends in China’s growing wealth and power relative to the U**nited **S**tates, but especially looks ahead to what it sees as the period of maximum danger – that time when a dissatisfied China could be in a position to overtake the US on dimensions believed crucial for assessing power. Reports beginning in the mid-1990s that offered extrapolations suggesting China’s growth would give it the world’s largest gross domestic product (GDP aggregate, not per capita) sometime in the first few decades of the twentieth century fed these sorts of concerns about a potentially dangerous challenge to American leadership in Asia.17 **The huge gap between Chinese and American military capabilities** (especially in terms of technological sophistication) **has** so far **discouraged prediction of comparably disquieting trends on this dimension, but inklings of similar concerns may be reflected in occasionally alarmist reports about purchases of** advanced **Russian air and naval equipment, as well as concern that Chinese espionage may have undermined the American advantage** in nuclear and missile technology, and speculation about the potential military purposes of China’s manned space program.18 Moreover, **because a dominant state may react to the prospect of a crossover and believe that it is wiser to embrace the logic of preventive war and act early to delay a transition while the task is more manageable**, Organski and Kugler’s powertransition theory also provides grounds for concern about the period prior to the possible crossover.19

### China

**Global SMR development is 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.**

**US falling behind China**

**Ervin 12/28**

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**The Obama** administration’s **decision to kick-start commercial use of s**mall **m**odula**r** reactors **has** **made** one thing **clear: The notion that nuclear power is slipping away is wrong**. Although nuclear power faces difficult challenges, industry and government are working together to forge a new path.¶ **The D**epartment **o**f **E**nergy **has earmarked funds for a new public-private partnership to** help **develop** innovative **small reactors** that are about one-third the size of those in large conventional nuclear plants. These small reactors are modular, meaning they will be built in factories before they are shipped and installed at nuclear sites. This production method has the potential to reduce the cost of nuclear power significantly.¶ Southern Co. has begun building two new nuclear plants in Georgia using new construction techniques that could convince other companies nuclear plants are easier to build than otherwise thought.¶ Congress is planning to take up comprehensive legislation on nuclear waste next year using a “consent-based approach” to finding a site for a deep-geologic repository or an interim storage facility. Both would hold high-level waste and used fuel. Such an approach was recommended earlier in the year by a high-level blue-ribbon commission.¶ With respect to nuclear safety, American companies are adopting lessons learned from the Fukushima nuclear accident in Japan.¶ US industry is playing an active role in the global market for nuclear technology, where as much as $740 billion in business is at stake over the next decade. With 104 reactors, America still leads the world in installed nuclear capacity. This represents about 30 percent of global nuclear generation. Congress needs to authorize funds for projects to demonstrate the feasibility of small modular reactors.¶ Global electricity requirements are projected to grow by an estimated 80 percent by 2030.¶ Nuclear power remains the only proven technology capable of reliably providing zero-carbon energy on a scale that can have a meaningful impact on global warming.¶ **A serious threat to the future of American nuclear power is the shortage of government** research and development **funds for advanced nuclear** technologies. **Other countries, notably China, are devoting a larger share of their energy funding to nuclear research** on fast reactors and other designs that are inherently safe and produce little or no waste. **The US needs to do the same.**

**Delaying commercialization allows China to solidify their lead**

**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>)

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.

**Using the DOD as a first mover leads to rapid commercialization and allows the US to out-compete other countries**

**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>)

Path forward: Department of Defense as first-mover¶ Problematically, despite the immense energy security benefits that would accompany the wide-scale adoption of small modular reactors in the US, with a difficult regulatory environment, anti-nuclear lobbying groups, skeptical public opinion, and of course the recent Fukushima accident, the nuclear industry faces a tough road in the battle for new reactors. While President Obama and Energy Secretary Chu have demonstrated support for nuclear advancement on the SMR front, progress will prove difficult. However, a potential route exists by which small reactors may more easily become a reality: the US military.¶ The US Navy has successfully managed, without accident, over 500 small reactors on-board its ships and submarines throughout 50 years of nuclear operations. At the same time, serious concern exists, highlighted by the Defense Science Board Task Force in 2008, that US military bases are tied to, and almost entirely dependent upon, the fragile civilian electrical grid for 99% of its electricity consumption. To protect military bases’ power supplies and the nation’s military assets housed on these domestic installations, the Board recommended a strategy of “islanding” the energy supplies for military installations, thus ensuring their security and availability in a crisis or conflict that disrupts the nation’s grid or energy supplies.¶ DOD has sought to achieve this through decreased energy consumption and renewable technologies placed on bases, but these endeavors will not go nearly far enough in achieving the department’s objectives. However, by placing small reactors on domestic US military bases, DOD could solve its own energy security quandary—providing assured supplies of secure and constant energy both to bases and possibly the surrounding civilian areas as well. Concerns over reactor safety and security are alleviated by the security already present on installations and the military’s long history of successfully operating nuclear reactors without incident.¶ Unlike reactors on-board ships, small reactors housed on domestic bases would undoubtedly be subject to Nuclear Regulatory Commission (NRC) regulation and certification, however, with strong military backing, adoption of the reactors may prove significantly easier than would otherwise be possible. Additionally, as the reactors become integrated on military facilities, general fears over the use and expansion of nuclear power will ease, creating inroads for widespread adoption of the technology at the private utility level. Finally, and perhaps most importantly, action by DOD as a “first mover” on small reactor technology will preserve America’s badly struggling and nearly extinct nuclear energy industry. The US possesses a wealth of knowledge and technological expertise on SMRs and has an opportunity to take a leading role in its adoption worldwide. With the domestic nuclear industry largely dormant for three decades, the US is at risk of losing its position as the global leader in the international nuclear energy market. If the current trend continues, the US will reach a point in the future where it is forced to import nuclear technologies from other countries—a point echoed by Secretary Chu in his push for nuclear power expansion. Action by the military to install reactors on domestic bases will guarantee the short-term survival of the US nuclear industry and will work to solidify long-term support for nuclear energy.¶ Conclusions¶ In the end, small modular reactors present a viable path forward for both the expansion of nuclear power in the US and also for enhanced US energy security. Offering highly safe, secure, and proliferation-resistant designs, SMRs have the potential to bring carbon-free baseload distributed power across the United States. Small reactors measure up with, and even exceed, large nuclear reactors on questions of safety and possibly on the financial (cost) front as well. SMRs carry many of the benefits of both large-scale nuclear energy generation and renewable energy technologies. At the same time, they can reduce US dependence on fossil fuels for electricity production—moving the US ahead on carbon dioxide and GHG reduction goals and setting a global example. While domestic hurdles within the nuclear regulatory environment domestically have proven nearly impossible to overcome since Three Mile Island, military adoption of small reactors on its bases would provide energy security for the nation’s military forces and may create the inroads necessary to advance the technology broadly and eventually lead to their wide-scale adoption.

**SMR commercialization 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**.

**Ceding nuclear leadership to China leads to unchecked Chinese hege in Asia – kills US regional leadership**

**Cullinane ‘11**

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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 checks escalation in multiple hotspots**

**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.**

**Those 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 open conflict by asserting hegemony in the South China Sea- US leadership key to solve**

**Hung ‘12**

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| By 2009-2010, **the heightened tension between China and the ASEAN claimants over the contested islands led to an internationalization of the conflict, with the US and other powers beginning to express a view on the disputes.** That’s understandable, given that the South China Sea is the world’s second-busiest sea-lane, with more than half of the world’s super tankers and $5.3 trillion in annual trade passing through the area (US trade alone accounts for $1.2 trillion of that figure). **The concern over China’s claims and assertive behavior, coupled with China’s lack of transparency in its military modernization program, have created an arms race in Southeast Asia and elicited strong reactions from major powers worried about the situation. India and Japan**, for their part, are **also concerned over freedom of navigation**. Both countries have advocated peaceful resolution of the disputes, but have also increased their diplomatic, economic and naval presence in the area. **The US,** meanwhile, **is in the midst of a policy pivot to the Asia-Pacific**, committing 60 percent of its naval assets to the Pacific Ocean, **and taking actions to strengthen and modernize “historic alliances” with Japan, South Korea, Australia, the Philippines and Thailand, as well as building “robust partnerships” throughout the region**.4 Russia has also begun to voice its concern over the issue of freedom of navigation and “outside meddling” in the South China Sea. In May 2009, as the deadline for claims based on the United Nations Convention on the Law of the Sea (UNCLOS) approached, China was forced to put its cards on the table and Beijing officially presented its nine-dashed-line map, claiming control over 80 percent of the South China Sea and encroaching on territories claimed by other Southeast Asian countries. Almost immediately, **the US Senate held a hearing on the South China Sea and in June unanimously passed a resolution “deploring China’s use of force in the South China Sea and supporting the continuation of operations by US armed forces in support of freedom of navigation rights in international water and air space in the South China Sea.”** In June 2010, at the Shangri-La Dialogue in Singapore, heated exchanges over the South China Sea took place between China and the US, joined by other ASEAN countries. A month earlier, at the Strategic and Economic Dialogue between the US and China in Beijing, **Chinese officials**, in a move viewed as **raising the stakes in the conflict, declared the country’s claims in the South China Sea to be a “core interes**t.”5 **Influential elites in China view the South China Sea as** “blue territory” — that is, as much a **part of China’s sovereign territory** as Tibet, Xinjiang or Taiwan.6 The US response came in the form of a speech by US Secretary of State Hillary Clinton at the ASEAN Regional Forum (ARF) in Hanoi in July, in which she made it clear that “The United States has a national interest in freedom of navigation, open access to Asia’s maritime commons and respect for international law in the South China Sea.” Significantly, American and Chinese understandings of “freedom of navigation” differ. **The US believes it includes the right to conduct military exercises and collect intelligence and militarily useful data, while China wants foreign naval ships and aircraft to seek China’s permission before entering its “internal waters” in the South China Sea.**7 **Since conflicts of national interests between major world powers can easily lead to friction and war, the escalating tensions between China and the US over these maritime disputes should be a serious cause for concern.** The Systemic Conflict **From a systemic perspective, the US-China conflict over the South China Sea may be seen as conflict between a rising power and a status quo power**. For decades the US, through its Seventh Fleet and its Pacific Command, was the undisputed naval power in the Pacific. The American defeat in Vietnam in the 1970s and its later involvement in the wars in Afghanistan and Iraq have changed the situation. While the US reduced its military presence in Asia and got bogged down in two costly and draining wars, China’s economy was growing and its military modernization program was gaining momentum; Beijing, as a result, has become a dominant regional power economically, politically and militarily. Chinese leaders departed from Deng Xiaoping’s famous dictum to “hide your intention, bide for time,” and began to flex China’s muscles, particularly over the South China Sea. China’s assertion of its “historical right” to claim the sea is weak and doesn’t conform to either UNCLOS or customary international law. **What China has been doing represents nothing less than an attempt to rewrite international law and impose its will on the region, shape global political realities and influence the “rules of the road” for the international order**.8 **The US**, in both words and deeds, **has signaled that it does not accept this.** It has strengthened its military presence in Asia, revitalized its strategic relations with old allies and helped improve the defense capabilities of small countries in the region. In July 2012, when China created a prefectural-level city at Sansha, a small island in the South China Sea, and established a military garrison there to “exercise sovereignty over all land features inside the South China Sea,” the US State Department reacted by publicly denouncing China’s action as “counter to collaborative diplomatic efforts to resolve differences and risks further escalating tensions in the region,” while Congressman Howard Berman, a leading member of the House Committee on Foreign Relations, confirmed that the administration of US President Barack Obama had “repeatedly made clear to Beijing that the US will not allow China to assert hegemony over the region.”9 **Conflicts of interests between rising powers and status quo powers have in the past accelerated arms races and led to war.** The key questions are, can such a collision course be altered, and can the core conflicts between the two powers be resolved? **Possible End Games** There are a number of possible scenarios for resolving the South China Sea disputes. The first is that China moderates its excessive claims and strikes a deal with other coastal nations, with third-party arbitration or adjudication if necessary, based on recognized international law on territorial seas, exclusive economic zones and continental shelves. Before adopting its nine-dashed line, China had drawn an eleven-dashed line map, two lines of which were in the Gulf of Tonkin.10 This, however, did not prevent China and Vietnam from achieving an agreement on the demarcation of sea borders in that gulf. Moreover, Chinese officials have repeatedly denied that China has officially declared the South China Sea its “core interest,” leaving open the possibility of coming to an understanding regarding conflicting claims. Some Chinese scholars and experts working in government think tanks have privately acknowledged “the problematic nature of China’s policy in the South China Sea,” particularly with regard to “the status of the nine-dotted line.” These analysts and strategic thinkers have expressed concern that the tense situation in the South China Sea could sidetrack China’s “course of reform.”11 This leaves the door open for discussion and provides the space in which China might entertain possible concessions that would avoid embroiling China and its Southeast Asian neighbors in a long argument over China’s excessive claims. The second scenario is one in which China, taking advantage of the differential in power between it and other rival claimants, relies on a combination of unilateral actions, brinkmanship, piecemeal advances and divide-and-conquer tactics to gradually and steadily establish actual control of the sea area within the nine-dashed line. The standoff between China and the Philippines at Scarborough Shoal was a perfect example of how this possible scenario might unfold. The Scarborough Shoal standoff began in May 2012 when a Philippine Navy frigate was sent to investigate the area and boarded Chinese fishing boats in an area it claimed belonged to the Philippines’ EEZ. China responded by sending two unarmed China Maritime Surveillance vessels to interpose themselves between the frigate and the fishing boats and let them escape. Both sides sent in reinforcements. At the height of the standoff, there were a handful of Philippine boats facing almost 100 Chinese vessels. Faced with the overwhelming number of Chinese ships and without international support, the Philippine had to cut a deal in which both sides withdrew their ships. But after all the Philippine boats had withdrawn, China roped off the entrance to the shoal, effectively establishing its de facto control over the contested area. With that fait accompli, a new status quo in favor of China was established. This tactic of resorting to low-grade pressure to create a series of new “facts” may lead to what Toshi Yoshihara termed “strategic fatigue,” which could, in the long run, weaken resistance by rival claimants and lead to a grudging acceptance by the US of China’s claims.12 With this achieved, China would have effective control of navigation in the South China Sea and could dictate the use of that important sea-lane of communication. This approach is being resisted by ASEAN claimants and by other major powers that share the Pacific Ocean. Its success or failure will depend on two things: 1) whether China succeeds in its “divide-and-conquer” approach to ASEAN; and 2) whether ASEAN can summon the determination and capacity to act with a united front to resist China’s pressure and involve other major powers, especially the US. China’s current aggressive approach has caused friction and tension and, if unrestrained, may lead to military conflicts.13 In the long run, it will push many Asian countries closer to the US and may lead to a new kind of Cold War and containment, pitting a bloc of countries supporting the American vision of an Asian regional order against a group supporting the Chinese vision of an Asian regional order. This scenario is a nightmare for Southeast Asian countries that have worked so hard to strengthen ASEAN solidarity and promote the concept of ASEAN centrality, in order to avoid being caught up in the rivalry between the US and China. The third scenario is that China reaches an accommodation with the US, based on American recognition of China as an undisputed leader in the South China Sea, and a peaceful transition of leadership in the Asia-Pacific area from the US to China occurs. If this were to happen, it would unsettle all other Asian nations, big and small, but once the US began the accommodation process, other countries would simply have to fall in line. This process, however, would be dangerous globally and regionally. **There is no guarantee,** however, **that if China were to dominate Asia, she would stop there.** In response to the reality of a spectacularly rising China and an America burdened with economic problems and a dysfunctional government, **scholars** such as Adam Quinn **have focused on the beginning of a power transition from the US, a declining power, to China, a rising power.**14 **Chinese strategic thinkers have not missed the possibility that the current contest over the South China Sea may represent the first steps toward this transition.** Ding Gang, a senior editor at the Communist Party’s People’s Daily, commented: “**It’s still unknown if the US plans to input equally massive manpower and financial resources as China has injected into this region. It’s very likely that the US lacks the motivation to do this in the long run**. And China may become the strongest economic, political and military power in Asia.”15 **The problem with this scenario is that it neglects the extent to which the two key players involved in this transition — China and the US — are regimes that represent incompatible visions of the future of the region** and the world. A peaceful transition of power took place from the British Empire to the American Empire, largely because it was a case of one democracy replacing another, trading roles as the sentinels of shared regional interests. The British were willing to relinquish their dominance and were assured that, with another democracy taking the helm, its security and wellbeing were not threatened. But **the clash between undemocratic revisionist powers (Germany, Italy and Japan) and democratic powers in the 1930s led to the Second World War.** Regionally, **this scenario would be most undesirable for smaller ASEAN countries and is unlikely to occur so long as the US has the capacity and the determination to maintain its supremacy in the Asia-Pacific region, a determination that has been strongly restated by US leaders**, from the president to the secretaries of defense and state as well as by leading members of Congress.16 Aaron Friedberg points out **that the ideological gap between China and the US is too great and the level of trust too low to facilitate an accommodation**. He makes the case that China’s ultimate goal of regional hegemony would run counter to the US “grand strategy, which has remained constant for decades: to prevent the domination of either end of the Eurasian landmass by one or more potentially hostile powers.”17  |

**Emerging dynamics means conflict will escalate- 6 reasons**

- no cooling off periods

- New ASEAN secretary general is anti-China

- New ASEAN chair is too weak to hammer out a deal

- India getting involved

- more resources will be found

- new Chinese leadership won’t back down

**Kurlantzick 12/6**/12

[Joshua Kurlantzick, Fellow for Southeast Asia @ Council on Foreign Relations. <http://blogs.cfr.org/asia/2012/12/06/south-china-sea-going-to-get-worse-before-it-might-gets-better/> ETB]

This week’s latest South China Sea incident, in which a Chinese fishing boat cut a Vietnamese seismic cable —at least according to Hanoi— is a reminder that, despite the South China Sea dominating nearly every meeting in Southeast Asia this year, **the situation in the Sea appears to be getting worse.** **This is in contrast to flare-ups in the past, when after a period of tension, as in the mid-1990s, there was usually a cooling-off period**. Although there have been several **brief cooling-off periods** in the past two years, including some initiated by senior Chinese leaders traveling to Southeast Asia, **they have not stuck, and the situation continues to deteriorate** and get more dangerous.¶ **In the new year, it will likely get even worse. Here’s why:**¶ **The new** Association of Southeast Asian Nations (**ASEAN) secretary-general comes from Vietnam**. Over the past three years, a more openly forceful **China has found it difficult to deal with ASEAN leaders who even voice ASEAN concerns**. But **these leaders,** like former Thai foreign minister and ASEAN Secretary-General Surin Pitsuwan, were **nothing compared to the new ASEAN secretary-**general, Vietnamese Deputy Foreign Minister Le Luong Minh. Although he is a career diplomat and certainly can be suave and attentive, **he** is still a former Vietnamese official, and undoubtedly **will bring** with him some of **the Vietnamese perspective toward China, which is quickly turning more acrid.**¶ **This year’s ASEAN chair is Brunei**. Keeping to its tradition of rotating the chair every year, in 2013 ASEAN will be headed by Brunei. Although some might think Brunei’s leadership will be better for stability than the 2012 ASEAN leadership of Cambodia, perceived by many other ASEAN members as carrying China’s water, the fact that **Brunei** is just as much of a diplomatic minnow as Cambodia **will mean there is no powerful wrangler in the chair’s seat to hammer out a common ASEAN perspective.** Were Indonesia or Singapore the chair, the situation might be different.¶ **India is playing a larger** and larger **role in the South China Sea, adding even more potential players to the mix, and more powerful navies**. **The recent warning by Beijing that India and Vietnam should not engage in joint exploration is only going to lead to a harsher Indian response, since Indian elites pay far more attention to —and are more easily aggrieved by— China than the reverse.**¶ **The more they look, the more likely they will fin**d. As reported by the New York Times, “On Monday, China’s National Energy Administration named the South China Sea as the main offshore site for natural gas production. Within two years, China aims to produce 150 billion cubic meters of natural gas from fields in the sea, a significant increase from the 20 billion cubic meters produced so far, the agency said.” Although I do not think that the oil and gas potential in the Sea is the biggest driver of conflict, compared to its strategic value**, the more China** (and anyone else) **explores for energy in the Sea, the more likely they will** (eventually) **come up with potential deposits that will only raise the stakes**, if the forecasts of the Sea’s petroleum potential are to be believed.¶ **A new Chinese leadership is unlikely to want to show any weakness.** **With the leadership of this generation even more split than in the past, following** a contentious Party Congress, **continued infighting among acolytes of the major Chinese leaders,** and the Bo Xilai fiasco, **the new leadership is in no position, with Party members and the general educated public, to give any room on a contentious issue like the South China Sea.**¶The Obama administration has passed its period of focusing on more effective dialogue and crisis mediation with China. Officials from the administration’s first term, who naturally had the highest hopes for better dialogue, are gone, with many of them leaving just as convinced as their Bush predecessors that real dialogue was difficult if not impossible. Don’t expect a second term to yield better results with such a dialogue.

**Risk of miscalc and escalation are high- triggers global war- US, Russia, and India get drawn in**

**Canberra Times 1/21/**13

<http://www.canberratimes.com.au/opinion/editorial/a-real-risk-in-south-china-sea-20130120-2d14p.html> ETB

The close student of history might think that **the stand-off between Japan and China over the** sovereignty of a few small islands in the **South China Sea has** a very **close resemblance to the** **international landscape just before** the start of **the First World War** 99 years ago. In the past week, **Japan and China have been playing military chicken**, **each hoping the other blinks before a massive conflagration. The resemblance to August 1914 goes beyond the way in which both sides are ratcheting up the bluster, threats and the pressure, primarily for domestic political consumption rather than tactical or serious strategic advantage, against the risk that even a slight political or military miscalculation or chance event** (like an assassination in Sarajevo) actually **sets off conflicts no one intended**, expected or actually wanted. **It** also **has** parallels with **the potential for such a conflict, whether started by China or Japan, to explode domino-like into a much wider brawl, inevitably causing confrontation between China and the US, and**, unwilling but unavoidable entry by most of the northern Pacific nations, including **Russia**, **Vietnam, the Koreas, the Philippines** and **Australia**, **and**, probably **India**. It is impossible to calculate how such a conflict would go, but **it would be catastrophic** for millions of people, with survivors wondering why it came to escalate so quickly and to become, so suddenly, for two countries such a critical matter worth staking their national survival.¶ No one can firmly say which nation ''has'' sovereignty over the Diaoyu or Senkaku Islands. Of themselves, they have little economic value, other than that the nation which can claim to ''own'' them can claim the right to exploit the adjacent sea for any mineral or petroleum wealth. Ownership depends on where one starts the clock, and China has as good a case as Japan, of itself a reason why Japan must negotiate. China had practical ownership and control until the late 19th century when an awakening and expansionist Japan annexed it during a period when China had been weakened by confrontations and concession to western powers and Japan. China claims that it protested strongly at the time, and certainly, laid claim for their return at the end of the Second World War. At one stage both countries agreed to hold their competing claims in suspense, but neither withdrew them.¶ **The US has tacitly recognised the Japanese claim,** and, foolishly, **intimated that it would go to war to defend it.** But the US rationale does not resolve an issue that precedes its treaty relationships, and its status quo argument might suggest, wrongly, that it likewise admits Russia's claim both to the former Japanese territory of Sakhalin and all the Kuril Islands, including the ones Japan denies ever ceding.¶ Like China's disputes over other islands with Vietnam, Russia, the Philippines, Brunei, Indonesia and Malaysia, argument is kept alive by the prospect of oil and mineral claims as well as economic zones, but, in recent times, a **generally peaceful status quo has been aggravated by nationalistic bombast, in Japan as much as in China. China's belligerence is aggravated by unresolved anger at Japanese aggression against China in the 1930s and 1940s, and its fear that Japan's raising of the temperature is part of an American strategy of ''encircling'' China.**

**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 U**nited **S**tates **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 U**nited **S**tates **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.

#### Sino-Indian war goes nuclear

**Caryl ‘10**

(CHRISTIAN CARYL “Nuclear arms race between China and India” JULY 13, 2010http://www.defence.pk/forums/indian-defence/65480-nuclear-arms-race-between-china-india.html, TSW)

Europeans and Americans, who have dominated world affairs for so long, are understandably fascinated by the recent rise of China and India. **It's obvious that the rapid economic resurgence of these two great Asian powers fundamentally alters the global rules of the game**.¶ China and India have built up a $60-billion-per-year trading relationship, and for years they've insisted that they want to work more closely on a variety of fronts. **Yet** **that expressed desire for collaboration co-exists uneasily with a long-running strategic rivalry**. **Parts of their mutual border remain in dispute. China has long supported Pakistan, India's main enemy**, **while the Indians have often befriended competitors of the Chinese** (**be it Moscow or Washington**). Lately Beijing has been cultivating relationships among countries in Southeast Asia and the Indian Ocean -- including Bangladesh, Myanmar, and Sri Lanka -- to protect the flow of commerce and access to supplies of natural resources. That has the Indians fearing encirclement. ¶ Lately, though, **another element is threatening to complicate the strategic calculus: the nuclear factor.** In themselves, of course, nuclear weapons are nothing new to either country. China has been a nuclear power for decades, while India conducted its first nuclear test in 1974 (though most outsiders tend to think of 1998, when New Delhi conducted a series of underground explosions designed to establish its bona fides as a genuine nuclear power). **Although both countries have sworn off first use, both have built up formidable deterrents designed to retaliate against any attackers.**¶ So what's new? A lot. **Concurrent with their rising economic might, China and India have set about modernizing their militaries to lend extra muscle to their growing strategic ambitions** -- and **given their complicated history, that can't help but spark worries**. "**China has the most active and diverse ballistic missile development program in the world**," noted one U.S. report. "**China's ballistic missile force is expanding in both size and types of missiles**." China's Dongfeng long-range missiles boast independently controlled multiple warheads, mobility, and solid fuel (meaning that they can be fired with little notice). That's just one of many areas in which the Chinese have demonstrated their advanced technological capabilities. In January China shot down one of its own satellites with a missile -- once again demonstrating, as it did with a previous test in 2007, that it's well down the path toward a ballistic missile defense system.¶ **That test unnerved the Indians, who saw the prospect of Chinese space weapons as a potential threat to the credibility of their own nuclear deterrent**. The **Indians**, meanwhile, **have been hard at work on a new generation of long-range missiles of their own.** The Agni-5, which is set for a test flight by the end of this year, has a projected range of 5,000 to 6,000 kilometers -- meaning that it would be able to hit even the northernmost of China's cities. The Indians are also conducting sea trials of their first ballistic missile submarine, the Arihant, which could be ready for deployment within another year or two.¶ It is undoubtedly true that the two countries mainly have other potential enemies in mind. China is primarily concerned about deterring potential attacks by the world's leading nuclear power, the United States, while India's strategic calculations focus on the threat from Pakistan. **Yet strategic logic is creating the potential for direct friction between Beijing and New Delhi on several fronts**. **The two countries are already engaged in a naval arms race** as **they jockey for influence in the waters around South Asia**. **Tensions have also been mounting over the two countries' border disputes** -- **especially the one involving the disputed area of Arunachal Pradesh (which is controlled by the Indians)**. The **Indians complain of a rising number of Chinese incursions into the area**; a remark by the Chinese ambassador to India a few years ago, when he claimed the territory as China's, stirred up public outrage. The Chinese, who regard Arunachal Pradesh as part of Tibet, worry in turn about a buildup of Indian troops in the region.¶ Rajeswari Pillai Rajagopalan of the Observer Research Foundation in New Delhi notes one concern. Starting in 2007, the Chinese military began a major upgrade of its missile base near the city of Delingha in Qinghai province, next to Tibet. **In addition to the intermediate-range missiles already stationed in the region, Rajagopalan says there are indications the Chinese** may **have beefed up the force** with long-range DF-31s and DF-31As -- **thus threatening not only northern India, including Delhi, but targets in the south as well.** It's entirely possible, she acknowledges in a 2007 paper, that the Chinese move could be aimed primarily at countering Russian missiles stationed in Siberia, but warns that "what the Chinese may consider a routine exercise may send a wrong signal and have serious implications." For his part, former U.S. diplomat Charles Freeman says that he regards Indian fears of a Chinese nuclear buildup as exaggerated, but worries that **a** fateful **mismatch of perceptions could already be spur**ring both countries toward **a** genuine **nuclear arms race**.¶ **The extent to which the two militaries are getting on each other's nerves became apparent in a bit of high-ranking trash-talking earlier this year**. **India's chief military science office**r, V.K. Saraswat, **declared that new advances in his country's ballistic missile technology meant that "**as far as cities in China and Pakistan are concerned, **there will be no target that we want to hit but can't hit**." **That prompted a retort from Rear Adm. Zhang Zhaozhong of China's National Defense University, who pointedly derided the "low level" of Indian technology**. "In developing its military technology," Zhang said, "China has never taken India as a strategic rival, and none of its weapons were specifically designed to contain India." **If that was meant to console anyone south of the border, it doesn't seem to have worked**.¶ **The best time to talk about an arms race, of course, is before it really gathers steam.** Krishnaswami Subrahmanyam, former chairman of India's National Security Advisory Board, says that China and India should take their nuclear concerns to the Conference on Disarmament, a multilateral negotiating forum at the United Nations. **But that, of course, would require the Chinese to acknowledge that there's a problem, which they might not be willing to do.** Rajagopalan notes that India and Pakistan have managed to set up some effective confidence-building measures on their common border, but that India and China have yet to do the same (aside from a few stillborn efforts in the early 1990s). Instituting mechanisms to warn each other of pending missile tests might be a start. "I think there's a great need for that," she says. "**Otherwise these kinds of tensions can spiral out of control." You can say that again.**

**Russia-China war goes nuclear**

Alexander **Sharavin** 200**1** Director of the Institute for Military and Political Analysis, What the Papers Say, Oct 3)

The strength of the Chinese People's Liberation Army (CPLA) has been growing quicker than the Chinese economy. A decade ago the CPLA was equipped with inferior copies of Russian arms from late 1950s to the early 1960s. However, through its own efforts Russia has nearly managed to liquidate its most significant technological advantage. Thanks to our zeal, from antique MiG-21 fighters of the earliest modifications and S-75 air defense missile systems the Chinese antiaircraft defense forces have adopted Su-27 fighters and S-300 air defense missile systems. China's air defense forces have received Tor systems instead of anti-aircraft guns which could have been used during World War II. The shock air force of our "eastern brethren" will in the near future replace antique Tu-16 and Il-28 airplanes with Su-30 fighters, which are not yet available to the Russian Armed Forces! **Russia may face the** "wonderful" prospect of combating the **Chinese** **army**, **which**, if full mobilization is called, **is comparable** in size **with Russia's entire** **population**, **which also has nuclear weapons** (even tactical weapons become strategic if states have common borders) **and would be absolutely insensitive to losses** (even a loss of a few million of the servicemen would be acceptable for China). Such a war would be more horrible than the World War II. It would require from our state maximal tension, universal mobilization and complete accumulation of the army military hardware, up to the last tank or a plane, in a single direction (we would have to forget such "trifles" like Talebs and Basaev, but this does not guarantee success either). Massive **nuclear strikes on** basic military forces and cities of **China** **would** finally **be the only way out**, what would exhaust Russia's armament completely. We have not got another set of intercontinental ballistic missiles and submarine-based missiles, whereas the general forces would be extremely exhausted in the border combats. In the long run, **even if the aggression would be stopped** after the majority of the Chinese are killed, **our country would be** absolutely **unprotected** **against** the "Chechen" and the "Balkan" variants both, and even against the first frost of **a** possible **nuclear winter**.

### Solvency

**DoD acquisition of SMR’s ensures rapid military adoption and commercialization, and prevents unfavorable tech lock-in**

**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)

DOD as First Mover¶ 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¶ 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. **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**.

**Alternative financing cuts costs and supercharges commercialization**

**Fitzpatrick 11**

Ryan Fitzpatrick, Senior Policy Advisor for Clean Energy at Third Way, Josh Freed, Vice President for Clean Energy at Third Way, and Mieke Eoyan, Director for National Security at Third Way, June 2011, Fighting for Innovation: How DoD Can Advance CleanEnergy Technology... And Why It Has To, content.thirdway.org/publications/414/Third\_Way\_Idea\_Brief\_-\_Fighting\_for\_Innovation.pdf

The DoD has over $400 billion in annual purchasing power, **which means the Pentagon could provide a sizeable market for new technologies**. **This can increase a technology’s scale of production, bringing down costs, and making the product more likely to successfully reach commercial markets**. **Unfortunately**, many potentially significant clean energy **innovations never get to the marketplace, due to a lack of capital during** the development and **demonstration stages. As a result, technologies that could help the military** meet its clean energy security and cost goals **are being abandoned or co-opted by competetors like China** before they are commercially viable here in the U.S. **By focusing its purchasing power on innovative products that will** help **meet its energy goals, DoD can provide** more **secure** and **cost-effective energy to the military—producing tremendous long-term savings**, while also **bringing** potentially **revolutionary technologies to the public**. Currently, many of these **technologies are passed over during** the **procurement** process **because of** higher **upfront costs—even if these technologies can reduce life-cycle costs** to DoD. The Department has only recently begun to consider life-cycle costs and the “fullyburdened cost of fuel” (FBCF) when making acquisition decisions. However, initial reports from within DoD suggest that the methodology for determining the actual FBCF needs to be refined and made more consistent before it can be successfully used in the acquisition process.32 The Department should fast-track this process to better maximize taxpayer dollars. Congressional appropriators— and the Congressional Budget Office—should also recognize the **savings that can be achieved by procuring advanced technologies to promote DoD’s energy goals**, even if these procurements come with higher upfront costs. **Even if the Pentagon makes procurement of emerging clean energy technologies a higher priority, it still faces real roadblocks in developing relationships with the companies that make them. Many clean energy innovations are developed by small businesses or companies that have no previous experience working with military procurement officers. Conversely, many procurement officers do not know the clean energy sector and are not incentivized to develop relationships with emerging clean energy companies**. Given the stakes in developing domestic technologies that would help reduce costs and improve mission success, the Pentagon should develop a program to encourage a better flow of information between procurement officers and clean energy companies—especially small businesses. Leverage Savings From Efficiency and Alternative Financing to Pay for Innovation. **In an age of government-wide austerity and tight** Pentagon **budgets**, current congressional **appropriations are simply not sufficient** to fund clean energy innovation. **Until Congress decides to direct additional resources** for this purpose, the **Defense** Department **must leverage** the money and other **tools it already has** to help develop clean energy. This can take two forms: repurposing money that was saved through energy efficiency programs for innovation and using alternative methods of financing to reduce the cost to the Pentagon of deploying clean energy. For several decades **the military has made** modest **use alternative financing** **mechanisms to fund** clean **energy** and efficiency **projects when appropriated funds were insufficient**. In a 2010 report, GAO found that while only 18% of renewable energy projects on DoD lands used alternative financing, these projects account for 86% of all renewable energy produced on the Department’s property.33 This indicates that **alternative financing can be particularly helpful to DoD in terms of bringing larger and more expensive projects to fruition**. One advanced financing tool available to DoD is **the energy savings performance contract** (ESPC). These agreements **allow DoD to contract a private firm to make upgrades to a building or other facility that result in energy savings, reducing overall energy costs without appropriated funds**. **The firm finances the cost, maintenance and operation of these upgrades and recovers a profit over the life of the contract**. While mobile applications consume 75% of the Department’s energy,34 DoD is only authorized to enter an ESPC for energy improvements done at stationary sites. As such, Congress should allow DoD to conduct pilot programs in which ESPCs are used to enhance mobile components like aircraft and vehicle engines. This could accelerate the needed replacement or updating of aging equipment and a significant reduction of energy with no upfront cost. To maximize the potential benefits of ESPCs, DoD should work with the Department of Energy to develop additional training and best practices to ensure that terms are carefully negotiated and provide benefits for the federal government throughout the term of the contract.35 This effort could possibly be achieved through the existing memorandum of understanding between these two departments.36 The Pentagon should also consider using any long-term savings realized by these contracts for other energy purposes, including the promotion of innovative technologies to further reduce demand or increase general energy security. In addition to ESPCs, **the Pentagon** also **can enter into** extended agreements with utilities to use DoD land to generate electricity, or for the **long-term purchase of energy**. **These** **innovative financing mechanisms**, known respectively as enhanced use leases (EULs) and power purchase agreements (PPAs), **provide a valuable degree of certainty to third party generators**. In exchange, the **Department can leverage its existing resources**—either its land or its purchasing power—**to negotiate lower electricity rates** and dedicated sources of locallyproduced power with its utility partners. **DoD has unique authority among federal agencies to enter extended 30-year PPAs**, **but only for geothermal energy projects and only with direct approval from the Secretary of Defense**. Again, limiting incentives for clean energy generation to just geothermal power inhibits the tremendous potential of other clean energy sources to help meet DoD’s energy goals. **Congress should consider opening this incentive up to other forms of clean energy generation**, including the production of advanced fuels. Also, given procurement officials’ lack of familiarity with these extended agreements and the cumbersome nature of such a high-level approval process, the unique authority to enter into extended 30-year PPAs is very rarely used.37 DoD should provide officials with additional policy guidance for using extended PPAs and Congress should simplify the process by allowing the secretary of each service to approve these contracts. Congress should also investigate options for encouraging regulated utility markets to permit PPA use by DoD. Finally, when entering these agreements, the Department should make every effort to promote the use of innovative and fledgling technologies in the terms of its EULs and PPAs. CON C L U S ION **The Defense Department is in a unique position to foster and deploy innovation in clean energy technologies**. This has two enormous benefits for our military: it will make our troops and our facilities more secure and it will reduce the amount of money the Pentagon spends on energy, freeing it up for other mission critical needs. If the right steps are taken by Congress and the Pentagon, the military will be able to put its resources to work developing technologies that will lead to a stronger fighting force, a safer nation, and a critical emerging sector of the American economy. **The Defense Department has helped give birth to technologies and new economic sectors dozens of times before**. For its own sake and the sake of the economy, **it should make clean energy innovation its newest priority**.

**DoD key- avoids regulations**

Glen **Butler**, Lt. Col., 20**11**, Not Green Enough, [www.mca-marines.org/gazette/not-green-enough](http://www.mca-marines.org/gazette/not-green-enough)

**SMRs have relatively low plant cost**, can replace aging fossil plants, and do not emit greenhouse gasses. Some are as small as a “hot tub” and can be stored underground, dramatically increasing safety and security from terrorist threats.25 Encouragingly, in fiscal year 2010 (FY10) the **DoE allocated** $0 to **the U.S. SMR Program**; in FY11, they’ve requested $38.9 million. This **funding is to support** two main activities—**public/private partnerships to advance** SMR **designs and research** **and** development and **demonstrations**. According to the DoE’s website, one of the planned program accomplishments for FY11 is to “collaborate with the Department of Defense (DoD) . . . to assess the feasibility of SMR designs for energy resources at DoD installations.”26 The Marine Corps should vigorously seek the opportunity to be a DoD entity providing one platform for this feasibility assessment.27 Fourth, **SMR** technology **offers** the Marine Corps **a**nother **unique means to lead from the front**—not just of the other Services but also of **the Nation, and** even **the world**.28 **This** potential Pete Ellis **moment should be seized**. There are simple steps we could take, and others stand ready to lead if we are not.30 But **the temptation to “wait and see” and “let the others do it; then we’ll adopt it” mentality is not** always **best**. **Energy security demands boldness**, not timidity. To be fair, nuclear technology comes with challenges, of course, and with questions that have been kicked around for decades. An April 1990 Popular Science article asked, “Next Generation Nuclear Reactors—Dare we build them?” and included some of the same verbiage heard in similar discussions today.31 Compliance with National Environment Policy Act requirements necessitates lengthy and detailed preaction analyses, critical community support must be earned, and disposal challenges remain. Still, none of these hurdles are insurmountable. Yet despite the advances in safety, security, and efficiency in recent years, nuclear in the energy equation remains the new “n-word” for most military circles. And despite the fact that the FY10 National Defense Authorization Act called on the DoD to “conduct a study [of] the feasibility of nuclear plants on military installations,” the Office of the Secretary of Defense has yet to fund the study. Fifth**, the** **cumbersome, bureaucratic certification** **process** **of** **the** Nuclear Regulatory Commission (**NRC**), often **enough to scare away potential entrepreneurs and investors, is not** **necessarily** **a roadblock to success**. The NRC is “responsible for licensing and regulating the operation of commercial nuclear power plants in the United States.” **Military installations offer unique platforms that** could likely **bypass** an extended **certification** process. **With established expertise and a long safety record in nuclear reactor certification**, operations, training, and maintenance, the Naval Nuclear Propulsion Program comprises the civilian and military personnel who: . . . design, build, operate, maintain, and manage the nuclear-powered ships and the many facilities that support the U.S. nuclear-powered naval fleet.”34 **Bypassing the NRC and initiating SMR experimentation** under ADM Hyman Rickover’s legacy umbrella of naval reactors **could shorten the process to a reasonable level for** Marine and naval **installations**.35

**They have the personnel and expertise**

**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)

Section 332 of the FY2010 National Defense Authorization Act (NDAA), “Extension and Expansion of Reporting Requirements Regarding Department of Defense Energy Efficiency Programs,” requires the Secretary of Defense to evaluate the cost and feasibility of a policy that would require new power generation projects established on installations to be able to provide power for military operations in the event of a commercial grid outage.28 A potential solution to meet this national security requirement, as well as the critical needs of nearby towns, is for DoD to evaluate SMRs as a possible source for safe and secure electricity. **Military facilities depend on reliable sources of energy to operate, train, and support national security missions. The power demand for most military facilities is not very high, and could easily be met by a SMR.** Table 1 provides the itemized description of the annual energy requirements in megawatt of electricity (MWe) required for the three hundred seventy four DoD installations.29 DoD History with SMRs **The concept of small reactors for electrical power generation is not new**. In fact, **the DoD built and operated small reactors for applications on land and at sea**. **The U.S. Army operated eight nuclear power plants from 1954 to 1977. Six out of the eight reactors built by the Army produced operationally useful power for an extended period, including the first nuclear reactor to be connected and provide electricity to the commercial grid**. 30 The Army program that built and operated compact nuclear reactors was ended after 1966, not because of any safety issues, but strictly as a result of funding cuts in military long range research and development programs. In essence, it was determined that the program costs could only be justified if there was a unique DoD specific requirement. At the time there were none.31 Although it has been many years since these Army reactors were operational, the independent source of energy they provided at the time is exactly what is needed again to serve as a secure source of energy today. Many of the nuclear power plant designs used by the Army were based on United States Naval reactors. Although the Army stopped developing SMRs, **the Navy as well as the private sector has continued to research, develop, and implement improved designs** to improve the safety and efficiency of these alternative energy sources. The U.S. Navy nuclear program developed twenty seven different power plant systems and almost all of them have been based on a light water reactor design.32 This design focus can be attributed to the inherent safety and the ability of this design to handle the pitch and roll climate expected on a ship at sea. **To date, the U. S Navy operated five hundred twenty six reactor cores in two hundred nineteen nuclear powered ships, accumulated the equivalent of over six thousand two hundred reactor years of operation and safely steamed one hundred forty nine million miles**. **The U.S. Navy has never experienced a reactor accident**.33 All of the modern Navy reactors are design to use fuel that is enriched to ninety three percent Uranium 235 (U235) versus the approximate three percent U235 used in commercial light water reactors. The use of highly enriched U235 in Navy vessels has two primary benefits, long core lives and small reactor cores.34 The power generation capability for naval reactors ranges from two hundred MWe (megawatts of electricity) for submarines to five hundred MWe for an aircraft carrier. A Naval reactor can expect to operate for at least ten years before refueling and the core has a fifty year operational life for a carrier or thirty to forty years for a submarine.35 As an example, the world’s first nuclear carrier, the USS Enterprise, which is still operating, celebrated fifty years of operations in 2011.36 The Navy nuclear program has set a precedent for safely harnessing the energy associated with the nuclear fission reaction. In addition, **the Navy collaborates with the private sector to build their reactors and then uses government trained personnel to serve as operators**. **Implementing the use of SMRs as a secure source of energy for our critical military facilities will leverage this knowledge and experience**.

**SMRs are cost-effective, safe, can be quickly deployed, and solve waste**

**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 design**s 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.

#### US nuclear is expanding, including SMRs

Silverstein 2/15

[Ken Silverstein is editor-in-chief for Energy Central's EnergyBiz Insider and a contributor to Forbes, http://thebreakthrough.org/index.php/programs/energy-and-climate/obama-aims-for-nuclear-breakthroughs/ ETB]

Two years ago, some thought that the nuclear energy had been leveled. But the industry today is picking up steam by getting construction licenses to build four new units and by getting government funding to develop smaller nuclear reactors that are less expensive and which may be less problematic when it comes to winning regulatory approval.

#### Nuclear now and inevitable

**Tirone 12** Jonathan, AP, “Nuclear Power Production Set to Grow Even After Japan Phase-Out (Vienna)”, 9/19, <http://www.northjersey.com/news/international/170334006_Nuclear_Power_Production_Set_to_Grow_Even_After_Japan_Phase-Out__Vienna_.html?page=all>

**Nuclear power is set to grow over the next four decades even after Japan shuts down its reactor fleet**, the International Atomic Energy Agency says. **Global** installed **capacity is set to rise to at least 469 gigawatts of energy by 2050 from 370 GWe today, according to the IAEA's most pessimistic scenario**. Nuclear capacity may reach as much as 1,137 GWe in a more favorable investment climate, the Vienna-based agency said. "We are a little bit more optimistic," said Holger Rogner, IAEA head of planning and economic studies, late Tuesday in the Austrian capital. "There is still a case for nuclear power." Japan has about 46 GWe of capacity at 50 reactors and plans to phase out nuclear power in the next three decades in response to the Fukushima Dai-ichi reactor meltdowns last year. The IAEA, established in 1957 to promote the peaceful uses of atomic power, sees growth driven by new reactor projects in China and in newcomer nations such as Turkey and the United Arab Emirates A gigawatt is equivalent to 1 billion watts of electricity. **The driving forces that brought about the renaissance in nuclear power — growing demand in emerging economies, energy security, elevated fossil-fuel prices and climate pressures — haven't changed, Rogner said. The IAEA presented its findings to the organization's 155 members, meeting at their general conference in Vienna. "The feedback we receive is that there is no real retraction from most national power programs**," Rogner said. "What we do see is that some newcomer states have a much better understanding for the need to get things right. Before Fukushima they were a little too optimistic how fast you can move forward the technology." Japan's new policy follows public pressure since the Fukushima disaster caused mass evacuations and left areas north of Tokyo uninhabitable for decades. Germany and Switzerland announced plans to phase out nuclear power after the meltdowns.

**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 U**nited **S**tates, 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 U**nited **S**tates.¶ **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** **U**nited **S**tates, 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 **s**mall **m**odular **r**eactor**s** 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 I**nternational **A**tomic **E**nergy **A**gency. "**They don't want to pull all their eggs in one basket** because of the new kid on the block called shale gas."¶

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**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**.

### Renewables DA

**Nuclear power is inevitable – that’s Ebinger and Squassoni and Hiro**

**Fossil fuels dominate for at least 2 decades**

**Liu & Liang 1-1**

Hengwei and Dapeng are at the School of Management at the Harbin Institute of Technology, “A Review of Clean Energy Innovation and Technology Transfer in China,” Renewable and Sustainable Energy Reviews, Volume 18 Pages 486-498

Global **energy will remain dominated by fossil fuels** in the coming decades, **with a majority of** the energy-**demand growth in developing countries**. **According to the** International Energy Agency (**IEA)**'s New Policies Scenario, which assumes that recent government commitments are implemented in a cautious manner, global primary energy demand will increase by one-third between 2010 and 2035, with 90% of the growth in non-Organization for Economic Co-operation and Development (OECD) countries. **The share of fossil fuels in global primary energy consumption falls from around 81% today to 75% in 2035.** Renewables increase from 13% of the mix today to 18% in 2035.

**Renewable investment low**

**Bloomberg 1/15**/13

[Andrew Herndon & Christopher Martin. <http://www.bloomberg.com/news/2013-01-15/private-equity-flees-clean-energy-as-investment-falls-energy.html> ETB]

**Private equity companies and venture capitalists** including Draper Fisher Jurvetson and Braemar Energy Ventures **reduced renewable-energy investment to the lowest since 2006** as once-promising companies failed or were sold at a loss.¶ Private equity and venture-capital **investors provided $5.8 billion** to solar, biofuel, wind and smart-grid startups worldwide last year, **down 34 percent from 2011**, according to an annual ranking by Bloomberg New Energy Finance. **The decline was part of an 11 percent drop** to $268.7 billion **in total investment for renewable energy** last year from a record $302.3 billion the year before.¶ **The decline shows a wariness among investors who’ve been burned by losses**, especially those who backed solar-panel manufacturers competing with Chinese companies. **It also reflects a shrinking market as fewer entrepreneurs sought capital for clean energy startups**, said Vinod Khosla, the billionaire founder of Menlo Park, California-based Khosla Ventures.¶ “All the fashionable **VCs have gone away from it**,” Khosla said in an interview. “Even **the number of businesses** people are **starting is smaller.”**¶ **The decline is the result of waning government incentives for renewable energy and weak performance** in the stock market, **which made it harder for investors to extract value**, said Ethan Zindler, an analyst at New Energy Finance in Washington. As a result, **renewable-energy startups are now finding it harder to get funding.**¶ Less Money’¶ “Venture investors in early stages do not have the same access to capital they did five years ago,” Zindler said in an interview. “**There is less money available,” and backers “can’t easily see the pot of gold at the end of the rainbow.”**¶ Draper Fisher steered $43.6 million to cleantech companies last year in 14 deals, down 37 percent from 2011’s total investment. Braemar’s total backing dropped 14 percent. Draper Fisher didn’t make an executive available for comment.

**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.

**Failing to push nuclear causes spike in gas investment, not renewables**

**Lamonica ‘10**

[Martin LaMonica is a senior writer covering green tech and cutting-edge technologies. He joined CNET in 2002 to cover enterprise IT and Web development and was previously executive editor of IT publication InfoWorld. http://news.cnet.com/8301-11128\_3-20002381-54.html ETB]

**Wind and solar power are intermittent**, which means that they do not provide electricity continuously. **Nuclear** power plants **can work round the clock and don't** have carbon **emissions during operation**, which is the primary reason that environmentalist Stewart Brand now backs nuclear.¶ There is also the issue of cost. Nuclear, wind, and solar are all more expensive than generating electricity with natural gas at its current prices, said Crane. But **if government policies do not include support for nuclear power,** such as loan guarantees, **then utilities will move to natural ga**s because it is less polluting than coal. But a spike in demand will drive up prices from $4 per million BTUs, which is where it is now, panelists said.¶ "**Renewables could get** to 20 or **30 percent** of generation (from about 2 percent now) and we can get there affordably. **But** **if** **you take nuclear out of the equation, the choice is** not 50 percent renewable, the choice is **taking** natural **gas to** 40 or **50 percent**," said James Connaughton, executive vice president for corporate affairs, public affairs, and environmental policy at utility Constellation Energy.

**SMRs key to renewables penetration**

**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)

Limitations of renewables **Renewable energy technologies have made great strides forward during the last decade.** **In an increasingly** carbon emissions and greenhouse gas (**GHG**) **aware global commons, the appeal of solar, wind, and other alternative energy sources is strong**, and many countries are moving to increase their renewable electricity generation. **However**, despite massive expansion on this front, **renewable sources struggle to keep pace with increasing demand**, to say nothing of decreasing the amount of energy obtained from other sources.¶ **The** continual **problem with solar and wind power is that**, lacking efficient energy storage mechanisms, **it is difficult to contribute to baseload power demands. Due to the intermittent nature of their energy production**, which often does not line up with peak demand usage, **electricity grids can only handle a limited amount of renewable energy sources**—a situation which Germany is now encountering. Simply put, nuclear power provides virtually carbon-free baseload power generation, and renewable options are unable to replicate this, especially not on the scale required by expanding global energy demands.¶ **Small nuclear reactors**, however, like renewable sources, **can provide enhanced, distributed, and localized power generation. As the US moves towards** embracing **smart grid technologies**, power **production at this level becomes a critical piece of the puzzle.** Especially **since renewable sources, due to sprawl, are of limited utility near crowded population centers, small reactors may in fact prove instrumental to enabling the smart grid to become a reality.¶**

**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**

**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**.

**CO2 isn’t key**

**Watts 12**

Watts, 25-year climate reporter, works with weather technology, weather stations, and weather data processing systems in the private sector, 7/25/’12

(Anthony, http://wattsupwiththat.com/2012/07/25/lindzen-at-sandia-national-labs-climate-models-are-flawed/)

ALBUQUERQUE, N.M. — Massachusetts Institute of Technology professor Richard **Lindzen**, a global warming skeptic, **told** about 70 **Sandia researchers** in June that **too much is being made of climate change by researchers** seeking government funding. He said their data and their methods did not support their claims.¶ “**Despite concerns over** the last decades with **the greenhouse process,** **they oversimplify the effect**,” he said. “**Simply cranking up CO2** [carbon dioxide] (**as the culprit**) **is not the answer” to what causes climate change.¶ Lindzen**, the ninth speaker in Sandia’s Climate Change and National Security Speaker Series, is Alfred P. Sloan **professor of meteorology in MIT’s department of earth, atmospheric and planetary sciences. He has published more than 200 scientific papers and is the lead author of Chapter 7** (“Physical Climate Processes and Feedbacks”) **of the** International Panel on Climate Change’s (**IPCC**) Third Assessment **Report. He is a member of the National Academy of Sciences and a fellow of the American Geophysical Union and the American Meteorological Society.¶** For 30 years, **climate scientists have been “locked into a simple-minded identification of climate with greenhouse-gas level**. … **That climate should be the function of a single parameter** (**like CO2**) **has always seemed implausible**. Yet **an obsessive focus on such an obvious oversimplification has likely set back progress by decades**,” Lindzen said.¶ **For major climates of the past, other factors were more important than carbon dioxide.** **Orbital variations** have been shown to **quantitatively account for** the **cycles of glaciations of the past 700,000 years,** he said, **and the elimination of the arctic inversion, when the polar caps were ice-free, “is likely to have been more important than CO2 for the warm episode during the Eocene** 50 million years ago.”¶ There is little evidence that changes in climate are producing extreme weather events, he said. “Even the IPCC says there is little if any evidence of this. In fact, there are important physical reasons for doubting such anticipations.”¶ Lindzen’s views run counter to those of almost all major professional societies. For example, the American Physical Society statement of Nov. 18, 2007, read, “The evidence is incontrovertible: Global warming is occurring.” But he doesn’t feel they are necessarily right. “Why did the American Physical Society take a position?” he asked his audience. “Why did they find it compelling? They never answered.”¶ Speaking methodically with flashes of humor — “I always feel that when the conversation turns to weather, people are bored.” — he said a basic problem with current computer climate models that show disastrous increases in temperature is that relatively small increases in atmospheric gases lead to large changes in temperatures in the models.¶ But, he said, “**predictions based on high** (**climate**) **sensitivity ran well ahead of observations**.”¶ **Real-world observations do not support IPCC models**, he said: “**We’ve already seen** almost the equivalent of **a doubling of CO2** (**in radiative forcing**) **and that has produced very little warming.”**¶He disparaged proving the worth of models by applying their criteria to the prediction of past climatic events, saying, “**The models are no more valuable than answering a test when you have the questions in advance.”¶ Modelers**, he said, merely **have used aerosols as a kind of fudge factor to make their models come out right.** (Aerosols are tiny particles that reflect sunlight. They are put in the air by industrial or volcanic processes and are considered a possible cause of temperature change at Earth’s surface.)¶ Then there is the practical question of what can be done about temperature increases even if they are occurring, he said. “China, India, Korea are not going to go along with IPCC recommendations, so … the only countries punished will be those who go along with the recommendations.”¶ He discounted mainstream opinion that climate change could hurt national security, saying that “historically there is little evidence of natural disasters leading to war, but economic conditions have proven much more serious. Almost all proposed mitigation policies lead to reduced energy availability and higher energy costs. All studies of human benefit and national security perspectives show that increased energy is important.”¶ He showed a graph that demonstrated that more energy consumption leads to higher literacy rate, lower infant mortality and a lower number of children per woman.¶ Given that proposed policies are unlikely to significantly influence climate and that lower energy availability could be considered a significant threat to national security, to continue with a mitigation policy that reduces available energy “would, at the least, appear to be irresponsible,” he argued.¶ Responding to audience questions about rising temperatures, he said **a 0.8 of a degree C change in temperature in 150 years is a small change.** **Questioned about** five-, seven-, and 17-year **averages that seem to show** that **Earth’s surface temperature** is **rising, he said temperatures are always fluctuating by tenths of a degree.**

### Politics

**Political Capital Not Key and Winners Win**

Michael **Hirsh 2/7**, Chief correspondent for National Journal. He also contributes to 2012 Decoded. Hirsh previously served as the senior editor and national economics correspondent for Newsweek, based in its Washington bureau, http://www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207

On Tuesday, in his State of the Union address, President Obama will do what every president does this time of year. For about 60 minutes, he will lay out a sprawling and ambitious wish list highlighted by gun control and immigration reform, climate change and debt reduction. In response, **the pundits will** do what they always do this time of year: They will talk **about how unrealistic most of the proposals are, discussions often informed by** sagacious reckonings of **how much “political capital” Obama possesses to push his program through**. **Most of this talk will have no bearing on what actually happens over the next four years. Consider** this: **Three months ago**, just before the November election, **if someone had talked seriously about Obama having enough political capital to oversee passage of both immigration reform and gun-control legislation** at the beginning of his second term—even after winning the election by 4 percentage points and 5 million votes (the actual final tally)—**this person would have been called crazy** and stripped of his pundit’s license. (It doesn’t exist, but it ought to.) In his first term, in a starkly polarized country, the president had been so frustrated by GOP resistance that he finally issued a limited executive order last August permitting immigrants who entered the country illegally as children to work without fear of deportation for at least two years. Obama didn’t dare to even bring up gun control, a Democratic “third rail” that has cost the party elections and that actually might have been even less popular on the right than the president’s health care law. And yet, **for reasons that have very little to do with Obama’s personal prestige or popularity**—**variously put in terms of a “mandate” or “political capital**”—**chances are fair that both will now happen**. What changed? In the case of gun control, of course, it wasn’t the election. It was the horror of the 20 first-graders who were slaughtered in Newtown, Conn., in mid-December. The sickening reality of little girls and boys riddled with bullets from a high-capacity assault weapon seemed to precipitate a sudden tipping point in the national conscience. One thing changed after another. Wayne LaPierre of the National Rifle Association marginalized himself with poorly chosen comments soon after the massacre. The pro-gun lobby, once a phalanx of opposition, began to fissure into reasonables and crazies. Former Rep. Gabrielle Giffords, D-Ariz., who was shot in the head two years ago and is still struggling to speak and walk, started a PAC with her husband to appeal to the moderate middle of gun owners. Then she gave riveting and poignant testimony to the Senate, challenging lawmakers: “Be bold.” As a result, momentum has appeared to build around some kind of a plan to curtail sales of the most dangerous weapons and ammunition and the way people are permitted to buy them. It’s impossible to say now whether such a bill will pass and, if it does, whether it will make anything more than cosmetic changes to gun laws. But one thing is clear: **The political tectonics have shifted dramatically in very little time. Whole new possibilities exist now that didn’t a few weeks ago.** Meanwhile, **the Republican members of the Senate’s so-called Gang of Eight are pushing hard for a new spirit of compromise on immigration reform**, a sharp change after an election year in which the GOP standard-bearer declared he would make life so miserable for the 11 million illegal immigrants in the U.S. that they would “self-deport.” But this turnaround has very little to do with Obama’s personal influence—his political mandate, as it were. It has almost entirely to do with just two numbers: 71 and 27. That’s 71 percent for Obama, 27 percent for Mitt Romney, the breakdown of the Hispanic vote in the 2012 presidential election. Obama drove home his advantage by giving a speech on immigration reform on Jan. 29 at a Hispanic-dominated high school in Nevada, a swing state he won by a surprising 8 percentage points in November. But the movement on immigration has mainly come out of the Republican Party’s recent introspection, and the realization by its more thoughtful members, such as Sen. Marco Rubio of Florida and Gov. Bobby Jindal of Louisiana, that without such a shift the party may be facing demographic death in a country where the 2010 census showed, for the first time, that white births have fallen into the minority**. It’s got nothing to do with Obama’s political capital** or, indeed, Obama at all. **The point is not that “political capital” is a meaningless term**. Often it is a synonym for “mandate” or “momentum” in the aftermath of a decisive election—and just about every politician ever elected has tried to claim more of a mandate than he actually has. Certainly, Obama can say that because he was elected and Romney wasn’t, he has a better claim on the country’s mood and direction. Many pundits still defend political capital as a useful metaphor at least. “It’s an unquantifiable but meaningful concept,” says Norman Ornstein of the American Enterprise Institute. “You can’t really look at a president and say he’s got 37 ounces of political capital. But the fact is, it’s a concept that matters, if you have popularity and some momentum on your side.” The real problem is that the idea of political capital—or mandates, or momentum—is so poorly defined that presidents and pundits often get it wrong. “Presidents usually over-estimate it,” says George Edwards, a presidential scholar at Texas A&M University. “The best kind of political capital—some sense of an electoral mandate to do something—is very rare. It almost never happens. In 1964, maybe. And to some degree in 1980.” For that reason**, political capital is a concept that misleads far more than it enlightens.** It is distortionary. It conveys the idea that we know more than we really do about the ever-elusive concept of political power, and it discounts the way unforeseen events can suddenly change everything. Instead, **it suggests,** erroneously, **that a political figure has a concrete amount of political capital to invest**, just as someone might have real investment capital—that a particular leader can bank his gains, and the size of his account determines what he can do at any given moment in history. Naturally, any president has practical and electoral limits. Does he have a majority in both chambers of Congress and a cohesive coalition behind him? Obama has neither at present. And unless a surge in the economy—at the moment, still stuck—or some other great victory gives him more momentum, it is inevitable that the closer Obama gets to the 2014 election, the less he will be able to get done. Going into the midterms, Republicans will increasingly avoid any concessions that make him (and the Democrats) stronger. But **the abrupt emergence of** the **immigration and gun-control** issues **illustrates how suddenly shifts in mood can occur and how political interests can align in new ways just as suddenly**. Indeed, **the pseudo-concept of political capital masks a larger truth about Washington that is kindergarten simple: You just don’t know what you can do until you try.** Or as Ornstein himself once wrote years ago, “**Winning wins.**” **In theory, and in practice,** depending on Obama’s handling of any particular issue, **even in a polarized time**, **he could still deliver on a lot of his second-term goals, depending on his skill and the breaks.** Unforeseen catalysts can appear, like Newtown. Epiphanies can dawn, such as when many Republican Party leaders suddenly woke up in panic to the huge disparity in the Hispanic vote. Some political scientists who study the elusive calculus of how to pass legislation and run successful presidencies say that political capital is, at best, an empty concept, and that almost nothing in the academic literature successfully quantifies or even defines it. “It can refer to a very abstract thing, like a president’s popularity, but there’s no mechanism there. That makes it kind of useless,” says Richard Bensel, a government professor at Cornell University. Even Ornstein concedes that the calculus is far more complex than the term suggests. **Winning on one issue often changes the calculation for the next issue;** there is never any known amount of capital. “The idea here is, **if an issue comes up where the conventional wisdom is that president is not going to get what he wants, and he gets it, then each time that happens, it changes the calculus of the other actors”** Ornstein says. “**If they think he’s going to win, they may change positions to get on the winning side. It’s a bandwagon effect.”** ALL THE WAY WITH LBJ Sometimes, **a clever practitioner of power can get more done just because he’s aggressive** and knows the hallways of Congress well. Texas A&M’s Edwards is right to say that the outcome of the 1964 election, Lyndon Johnson’s landslide victory over Barry Goldwater, was one of the few that conveyed a mandate. But **one of the main reasons for that mandate** (in addition to Goldwater’s ineptitude as a candidate) **was** President **Johnson’s masterful use of power** leading up to that election, **and his ability to get far more done than anyone thought possible, given his limited political capital.** In the newest volume in his exhaustive study of LBJ, The Passage of Power, historian Robert Caro recalls Johnson getting cautionary advice after he assumed the presidency from the assassinated John F. Kennedy in late 1963. Don’t focus on a long-stalled civil-rights bill, advisers told him, because it might jeopardize Southern lawmakers’ support for a tax cut and appropriations bills the president needed. “One of the wise, practical people around the table [said that] the presidency has only a certain amount of coinage to expend, and you oughtn’t to expend it on this,” Caro writes. (Coinage, of course, was what political capital was called in those days.) Johnson replied, “Well, what the hell’s the presidency for?” **Johnson didn’t worry about coinage, and he got the Civil Rights Act enacted, along with much else**: Medicare, a tax cut, antipoverty programs. He appeared to understand not just the ways of Congress but also the way to maximize the momentum he possessed in the lingering mood of national grief and determination by picking the right issues, as Caro records. “Momentum is not a mysterious mistress,” LBJ said. “It is a controllable fact of political life.” Johnson had the skill and wherewithal to realize that, at that moment of history, he could have unlimited coinage if he handled the politics right. He did. (At least until Vietnam, that is.) And then there are the presidents who get the politics, and the issues, wrong. It was the last president before Obama who was just starting a second term, George W. Bush, who really revived the claim of political capital, which he was very fond of wielding. Then Bush promptly demonstrated that he didn’t fully understand the concept either. At his first news conference after his 2004 victory, a confident-sounding Bush declared, “I earned capital in the campaign, political capital, and now I intend to spend it. That’s my style.” The 43rd president threw all of his political capital at an overriding passion: the partial privatization of Social Security. He mounted a full-bore public-relations campaign that included town-hall meetings across the country. **Bush failed utterly**, of course. **But the problem was not that he didn’t have enough political capital.** Yes, he may have overestimated his standing. Bush’s margin over John Kerry was thin—helped along by a bumbling Kerry campaign that was almost the mirror image of Romney’s gaffe-filled failure this time—but that was not the real mistake. **The problem was that whatever credibility or stature Bush thought he had earned as a newly reelected president did nothing to make Social Security privatization a better idea in most people’s eyes**. Voters didn’t trust the plan, and four years later, at the end of Bush’s term, the stock-market collapse bore out the public’s skepticism. Privatization just didn’t have any momentum behind it, no matter who was pushing it or how much capital Bush spent to sell it. The mistake that Bush made with Social Security, says John Sides, an associate professor of political science at George Washington University and a well-followed political blogger, “was that just because he won an election, he thought he had a green light. But there was no sense of any kind of public urgency on Social Security reform. It’s like he went into the garage where various Republican policy ideas were hanging up and picked one. I don’t think Obama’s going to make that mistake.… Bush decided he wanted to push a rock up a hill. He didn’t understand how steep the hill was. I think Obama has more momentum on his side because of the Republican Party’s concerns about the Latino vote and the shooting at Newtown.” Obama may also get his way on the debt ceiling, not because of his reelection, Sides says, “but because Republicans are beginning to doubt whether taking a hard line on fiscal policy is a good idea,” as the party suffers in the polls. THE REAL LIMITS ON POWER **Presidents are limited in what they can do by time and attention span**, of course, just as much as they are by electoral balances in the House and Senate. **But this**, too, **has nothing to do with political capital.** **Another well-worn meme of recent years was that Obama used up too much political capital passing the health care law in his first term**. **But the real problem was that the plan was unpopular, the economy was bad**, and the president didn’t realize that the national mood (yes, again, the national mood) was at a tipping point against big-government intervention, with the tea-party revolt about to burst on the scene. For Americans in 2009 and 2010—haunted by too many rounds of layoffs, appalled by the Wall Street bailout, aghast at the amount of federal spending that never seemed to find its way into their pockets—government-imposed health care coverage was simply an intervention too far. So was the idea of another economic stimulus. Cue the tea party and what ensued: two titanic fights over the debt ceiling. Obama, like Bush, had settled on pushing an issue that was out of sync with the country’s mood. Unlike Bush, Obama did ultimately get his idea passed. But the bigger political problem with health care reform was that it distracted the government’s attention from other issues that people cared about more urgently, such as the need to jump-start the economy and financial reform. Various congressional staffers told me at the time that their bosses didn’t really have the time to understand how the Wall Street lobby was riddling the Dodd-Frank financial-reform legislation with loopholes. Health care was sucking all the oxygen out of the room, the aides said. Weighing the imponderables of momentum, the often-mystical calculations about when the historic moment is ripe for an issue, will never be a science. It is mainly intuition, and its best practitioners have a long history in American politics. This is a tale told well in Steven Spielberg’s hit movie Lincoln. Daniel Day-Lewis’s Abraham Lincoln attempts a lot of behind-the-scenes vote-buying to win passage of the 13th Amendment, banning slavery, along with eloquent attempts to move people’s hearts and minds. He appears to be using the political capital of his reelection and the turning of the tide in the Civil War. But it’s clear that a surge of conscience, a sense of the changing times, has as much to do with the final vote as all the backroom horse-trading. “The reason I think the idea of political capital is kind of distorting is that it implies you have chits you can give out to people. It really oversimplifies why you elect politicians, or why they can do what Lincoln did,” says Tommy Bruce, a former political consultant in Washington. Consider, as another example, the storied political career of President Franklin Roosevelt. Because the mood was ripe for dramatic change in the depths of the Great Depression, FDR was able to push an astonishing array of New Deal programs through a largely compliant Congress, assuming what some described as near-dictatorial powers. But in his second term, full of confidence because of a landslide victory in 1936 that brought in unprecedented Democratic majorities in the House and Senate, Roosevelt overreached with his infamous Court-packing proposal. All of a sudden, the political capital that experts thought was limitless disappeared. FDR’s plan to expand the Supreme Court by putting in his judicial allies abruptly created an unanticipated wall of opposition from newly reunited Republicans and conservative Southern Democrats. FDR thus inadvertently handed back to Congress, especially to the Senate, the power and influence he had seized in his first term. Sure, Roosevelt had loads of popularity and momentum in 1937. He seemed to have a bank vault full of political capital. But, once again, a president simply chose to take on the wrong issue at the wrong time; this time, instead of most of the political interests in the country aligning his way, they opposed him. Roosevelt didn’t fully recover until World War II, despite two more election victories. **In terms of Obama’s second-term agenda, what all these shifting tides of momentum and political calculation mean is this: Anything goes**. Obama has no more elections to win, and he needs to worry only about the support he will have in the House and Senate after 2014. **But if he picks issues that the country’s mood will support**—such as, perhaps, immigration reform and gun control—**there is no reason to think he can’t win far more victories than any of the careful calculators of political capital now believe is possible**, **including battles over tax reform and deficit reduction**. **Amid today’s atmosphere of Republican self-doubt, a new, more mature Obama seems to be emerging**, one who has his agenda clearly in mind and will ride the mood of the country more adroitly**. If he can get some early wins**—as he already has, apparently, on the fiscal cliff and the upper-income tax increase—**that will create momentum**, **and one win may well lead to others**. “Winning wins.” **Obama himself learned some hard lessons over the past four years about the falsity of the political-capital concept**. Despite his decisive victory over John McCain in 2008, he fumbled the selling of his $787 billion stimulus plan by portraying himself naively as a “post-partisan” president who somehow had been given the electoral mandate to be all things to all people. So Obama tried to sell his stimulus as a long-term restructuring plan that would “lay the groundwork for long-term economic growth.” The president thus fed GOP suspicions that he was just another big-government liberal. Had he understood better that the country was digging in against yet more government intervention and had sold the stimulus as what it mainly was—a giant shot of adrenalin to an economy with a stopped heart, a pure emergency measure—he might well have escaped the worst of the backlash. But by laying on ambitious programs, and following up quickly with his health care plan, he only sealed his reputation on the right as a closet socialist. After that, Obama’s public posturing provoked automatic opposition from the GOP, no matter what he said. **If the president put his personal imprimatur on any plan**—from deficit reduction, to health care, to immigration reform—**Republicans were virtually guaranteed to come out against it.** But this year, when he sought to exploit the chastened GOP’s newfound willingness to compromise on immigration, his approach was different. He seemed to understand that the Republicans needed to reclaim immigration reform as their own issue, and he was willing to let them have some credit. When he mounted his bully pulpit in Nevada, he delivered another new message as well: You Republicans don’t have to listen to what I say anymore. And don’t worry about who’s got the political capital. Just take a hard look at where I’m saying this: in a state you were supposed to have won but lost because of the rising Hispanic vote. Obama was cleverly pointing the GOP toward conclusions that he knows it is already reaching on its own: If you, the Republicans, want to have any kind of a future in a vastly changed electoral map, you have no choice but to move. It’s your choice. **The future is wide open**.

**Obama proposing multiple competing bills solves**

**Todd et al 2-5**

Chuck is an NBC News’ Chief Political Correspondent, “Flooding the Zone,” <http://firstread.nbcnews.com/_news/2013/02/05/16852487-first-thoughts-flooding-the-zone>

\*\*\* Flooding the zone: Exactly one week away from President Obama’s State of the Union address, **the White House has spent** **the** early days of the **second term flooding the zone with its legislative agenda**. Last week, **the president delivered his big immigration speech** in Las Vegas. Yesterday, **he spoke about gun violence** in Minnesota. Today, he’s meeting at the White House with progressive, labor, and business leaders to discuss immigration reform and the budget situation. What’s going on here: The **Obama** White House **wants to overload Washington’s political circuits** in an effort **to see what it can get through Congress -- without letting Congress define what issues get addressed**. After all, **Republicans want to solely talk about the budget before the March budget showdown** (see yesterday’s multiple coordinated responses by House Republicans on the White House’s announcement it would be late with its budget). Yet **by flooding the zone**, Team **Obama -- with the bully pulpit** and the State of the Union at its disposal -- **wants to widen the political dialogue beyond** that **one issue**. This “**flooding the zone**” concept **is how** the **Obama** White House **operated in the first six months** of the first term, **and it’s where he got most of his legislative achievements**. **When the White House got bogged down on ONE issue** (health care, debt ceiling, etc), **officials determined they lost some of their political capital.**

**Rubio blocks passage**

**Grunwald 2-20**

Michael is Time’s Senior National Correspondent, “Yes, Rubio and Obama Mostly Agree on Immigration. No, that doesn’t mean Reform is Inevitable,” <http://swampland.time.com/2013/02/20/yes-rubio-and-obama-mostly-agree-on-immigration-no-that-doesnt-mean-reform-is-inevitable/>

It’s true that Senator Marco Rubio’s stated principles for comprehensive immigration reform are quite similar to President Obama’s. It’s also true that when Rubio attacks the president over reform, as he did after a White House legislative draft leaked last weekend, he’s signaling to his fervently anti-Obama base that he’s still a solid Tea Party Republican. As I wrote in my Rubio profile, “some of this is Beltway theater; reform could become toxic to Republicans if it’s perceived as Obama-friendly.” This is why smart restrictionists like Mark Krikorian of the National Review as well as smart reformers like Benjy Sarlin of Talking Points Memo seem to agree that Rubio is just posturing, that what really matters are the similarities between his principles and the president’s, that the partisan theater is designed to reduce Republican resistance to bipartisan reform.¶ Well, maybe. Obama did call Rubio in Jerusalem Tuesday night, and both sides expressed ritual optimism. But there are some real differences between Rubio and Obama on immigration. Sure, **Rubio’s rhetoric could** help make reform politically palatable to Republicans, and even help move reform substantively to the right. But it could also **help lay the groundwork for Rubio to scuttle reform, accuse Obama of overreaching, and claim credit for trying to forge a bipartisan solution.** Beltway theater can have real consequences, and **the more Rubio threatens to walk away from any deal that doesn’t include everything he wants, the more pressure he will face to walk away when the deal**, inevitably, d**oesn’t include everything he wants.** Nobody but Rubio knows how far he is willing to bend to cut a deal few of his supporters want with a president most of his supporters despise.¶ (MORE: If Immigration Reform Stalls, Federal Courts Could Have A Say)¶ Remember, in interviews with right-wing talkers like Rush Limbaugh, Mark Levin and Sean Hannity, **Rubio has drawn a series of lines in the sand, pledging to oppose any immigration bill that doesn’t reflect conservative principles**. He said he wouldn’t support any legislation that doesn’t secure the border (whatever that means in practice) and set up an employment verification system (also in the eye of the beholder) before sending undocumented immigrants along a path to citizenship. He insisted that all 11 million undocumented immigrants will have to go to the “back of the line” behind foreigners who followed the rules. He demanded a special “guest worker” program for agriculture. And he said Obama’s draft proposal, by failing to address “future flow” of legal immigrants, would actually make the situation worse.¶ The details of these differences may matter less than the fact that there are so many of them. Rubio has left himself an awful lot of exit ramps on the long and winding highway to bipartisan legislation. Ferocious opposition from right-wing radio helped derail similar reforms during the Bush administration, and everything Rubio is saying is consistent with an effort to try to defuse that opposition. But everything Rubio is saying is also consistent with an effort to get “caught trying,” a phrase the Obama White House uses to describe losing a battle but getting credit for fighting. **Rubio has already taken a stand for reform, so he’s well positioned to try to blame Obama for demanding too much if a deal doesn’t happen**. He’s the only prominent Republican who could make that case en espanol. And it’s hard to think of any Republican who has suffered any political consequences for blaming Obama for anything.¶ “It’s not an if-Obama-is-for-it-we-have-to-be-against-it-mentality,” he told me earlier this month. “There are a lot of points of contention, and they need to be worked through to my satisfaction if I’m going to support the final product.”¶ (MORE: Marco Rubio Responds to Obama’s State of the Union)¶ So it all depends how badly Rubio really wants reform. As I wrote, it’s a personal issue for him. He comes from a family of immigrants, a community of immigrants. It’s hard to imagine a more influential lobbyist than his mom. He’d also like to transcend his reputation as an achievement-free ideologue; brokering a reform deal would show he’s capable of getting stuff done. And ever since Hispanic voters overwhelmingly rejected Mitt Romney and his “self-deportation” theories, many Republican elites have been warning that the party may be doomed in presidential elections until it can get the immigration issue off the table.¶ But if **Rubio wants to get elected president in 2016, he’ll need to win a Republican primary dominated** not by elites, but **by Tea Party activists who think of the undocumented as freeloaders** and the president as a nightmare. They’re a lot likelier to trust a guy who denied Obama a major victory than a guy who helped him achieve it. Rubio also has to worry about House Republicans (who generally live in fear of their own Tea Party primary challenges) derailing the reform train while he’s still on it, which would make him look ineffectual as well as Obama-appeasing. And the 2016 Republican presidential primary is starting now, while the general election won’t start until 2016; there would be plenty of time for Rubio to pivot back to reform if he won the nomination. Anyway, **if Republicans decide that winning back Hispanics is their key to winning back the White House, Marco** Antonio **Rubio will have a leg up whether reform happens or not.**¶ (PHOTOS: Marco Rubio, Republican Savior)¶ For now**, if Rubio’s swipes at Obama help keep the Limbaughs and Levins of the world from launching an anti-reform crusade, they’re probably helping the cause of reform**. And he’s got nothing to lose by pressing Obama to accept stricter enforcement, a more arduous path to citizenship, and other items on conservative wish lists. But **eventually, there’s going to be a deal, and he’s going to have to decide whether to take it.** **With me, at least, he didn’t sound all that optimistic**.¶ “I’m not trying to throw cold water on the effort,” he said. “It’s a good effort, an important effort. But we have to be realistic about the pitfalls that lie ahead. This is a very difficult problem that the country hasn’t solved in over two decades.”

**Sequester Thumps**

AFP 2-20

Agence-France Press 2-20

“What is the Sequester and Why does it Matter,” <http://www.rawstory.com/rs/2013/02/20/what-is-the-sequester-and-why-does-it-matter/>

Privately, **White House officials believe that pressure on Republicans will get so great** that **they will be forced into a spending and revenues deal.**¶ The politics seem to favor the president — he is more popular than Republicans and polls show voters like the idea of more taxes for the rich.¶ **The danger for Obama is that if the sequester is not quickly fixed** and **the economy is damaged his presidential legacy is on the line**.¶ **Political capital he needs to drive through key second-term agenda items such as immigration reform and gun control could also be tarnish**ed.¶ Obama will crank up the blame game next week with campaign-style visits to regions likely to be hit by the sequester cuts.¶ Republicans are betting that apocalyptic scenarios of job losses, limp border enforcement and lax military readiness will not unfold immediately on March 1.¶ Conservatives think the president wants a solution more than they do so see the onus as on him to carve deeper spending cuts than he has so far offered.¶ Typically for Washington, everyone may look for a face saving way out — whether or not it fixes long-term deficit problems.¶ A new “continuing resolution” must be passed by Congress to maintain funding for government operations by the end of March.¶ Many observers believe both sides could use this mechanism to compromise on spending and revenues and fix the sequester retroactively.

#### Plan’s popular

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 of 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.

#### DoD doesn’t link

**Appelbaum 12**

Binyamin, Defense cuts would hurt scientific R&D, experts say, The New York Times, 1-8, <http://hamptonroads.com/2012/01/defense-cuts-would-hurt-scientific-rd-experts-say>

Sarewitz, who studies the government's role in promoting innovation, said **the Defense Department had been** more successful **than other federal agencies because it is the** main user of the innovations that it finances**.** **The Pentagon, which spends billions** each year on weapons, equipment and technology, **has an** unusually direct stake in the outcome **of its** research and development **projects.**¶ "The central thing that distinguishes them from other agencies is that they are the customer," Sarewitz said. "You can't pull the wool over their eyes."¶ **Another factor is the Pentagon's relative insulation from politics, which has allowed it to sustain a long-term research agenda** in controversial areas**. No matter which party is in power,** **the Pentagon has continued to invest in clean-energy tech**nology, **for example,** in an effort to find ways to reduce one of its largest budget items, energy costs.

**Nuke lobby supports- guarantees bipart support**

**Samuelsohn ‘11** (Darren Samuelsohn, March 16, 2011, “Nuclear industry lobbyists' clout felt on Hill,” Politico, <http://www.politico.com/news/stories/0311/51367.html>)

Facing its biggest crisis in 25 years, the U.S. nuclear power industry can count on plenty of Democratic and Republican friends in both high and low places.¶ During the past election cycle alone, the Nuclear Energy Institute and more than a dozen companies with big nuclear portfolios have spent tens of millions of dollars on lobbying and campaign contributions to lawmakers in key leadership slots and across influential state delegations.¶ The donations and lobbying funds came at a critical moment for the nuclear industry as its largest trade group and major companies pushed for passage of a cap-and-trade bill.¶ While that effort failed, the money is sure to **keep doors open** on Capitol Hill as lawmakers consider any response to the safety issues highlighted by multiple nuclear reactor meltdowns in Japan in the aftermath of last week’s monster earthquake and tsunami.¶ “The bottom line is you’ve got a variety of industrial interests that care about nuclear power and have a heck of a lot of money to spend if their business and their bottom line is put in political jeopardy,” said Dave Levinthal, communications director at the Center for Responsive Politics. “As Congress is talking about potentially diving deeper, these companies bring a lot of resources and a heck of a lot of cash to bear if tDhis fight goes forward.”¶ NEI, the industry’s biggest voice in Washington, for example, spent $3.76 million to lobby the federal government and an additional $323,000 through its political action committee on a bipartisan congressional slate, including 134 House and 30 Senate candidates, according to data compiled by the CRP.¶ Alex Flint, NEI’s senior vice president for government affairs, said the spending is a byproduct of record high demand for his industry.¶ “The fact that the day after the election, both the president and [House Speaker John Boehner] said nuclear was an area where it’s something they can agree, it’s made us that much more in demand,” Flint said. “Our lobbying expenses have gone up more in large part because we have more people talking to more members of Congress.”

**XO solves**

**The Hill 2-16**

“Dems: Obama can Act Unilaterally on Immigration Reform,” <http://thehill.com/blogs/regwatch/administration/283583-dems-recognize-that-obama-can-act-unilaterally-on-immigration-reform>

President **Obama** can – and **will – take steps on immigration** reform in the event Congress doesn't reach a comprehensive deal this year, according to several House Democratic leaders.¶ While the Democrats are hoping Congress will preclude any executive action by enacting reforms legislatively, they say **the administration has the tools to move unilaterally if the bipartisan talks** on Capitol Hill **break down**. Furthermore, they say, **Obama stands poised to use them**.¶ "I don't think the president will be hands off on immigration for any moment in time," Rep. Xavier Becerra (D-Calif.), the head of the House Democratic Caucus, told reporters this week. "He's ready to move forward if we're not."¶ Rep. Joseph Crowley (N.Y.), vice chairman of the Democratic Caucus, echoed that message, saying Obama is "not just beating the drum," for immigration reform, "he's actually the drum major."¶ "There are limitations as to what he can do with executive order," Crowley said Wednesday, "but he did say that if Congress continued to fail to act that he would take steps and measures to enact common-sense executive orders to move this country forward."¶ Rep. Raul Grijalva (D-Ariz.), who heads the Congressional Progressive Caucus, said there are "plenty" of executive steps Obama could take if Congress fails to pass a reform package. "**The huge one**," Grijalva said, **is** "the **waiving** of **deportation**" in order to keep families together.¶ "Four million of the undocumented [immigrants] are people who overstayed their visas to stay with family," he said Friday. "So that would be, I think, an area in which … there's a great deal of executive authority that he could deal with**."**¶ **The administration could also waive visa caps**, Grijalva said, **to ensure that industries like agriculture have ample access to low-skilled labor.**¶ "Everybody's for getting the smart and the talented in, but there's also a labor flow issue," he said.

**Aging crisis has no effect- any growth outweighs**

**Baker 2-2**

Dean is Co-Director for the Center for Economic and Policy Research, “Ezra Klein Strikes Out on Immigration and Demographics,” <http://www.cepr.net/index.php/blogs/beat-the-press/ezra-klein-srikes-out-big-on-immigration-and-demographics?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+beat_the_press+(Beat+the+Press)>

Ezra Klein usually can be counted on for good insights on politics and the economy, however today's piece on immigration is the sort of thing that could have been on a press release from Fix the Debt. The basic point is to tout the virtues of immigration. While there are benefits of immigration that Klein rightly highlights, much of the piece veers off into the sort of pablum readers expect from the non-Klein portions of the Post.¶ This is especially the case where **Klein dives off into demographics.¶ "The economic case for immigration is best made by way of analogy. Everyone agrees that aging economies with low birth rates are in trouble**; this, for example, is a thoroughly conventional view of Japan. It’s even conventional wisdom about the U.S. The retirement of the baby boomers is correctly understood as an economic challenge. The ratio of working Americans to retirees will fall from 5 to 1 today to 3 to 1 in 2050. Fewer workers and more retirees is tough on any economy."¶ Klein then adds, "there’s nothing controversial about that analysis."¶ Actually everything about that analysis is controversial, including the basic facts. (Actually, these are just wrong.) **The current ratio of workers to retirees is 2.8 to 1, it hasn't been 5 to 1 since the early 1960s. It is projected to fall to 2.0 to 1 by the mid 2030s**.¶ This is not just a gottcha, it shows the fallacy of Klein's basic point. **We have already seen a sharp decline in the ratio of workers to retirees, yet** even **people who follow the economy and economic policy closely,** **like Klein,** **were apparently not even aware of this fact**. Since this decline is never cited as factor causing our current economic problems, **why would** we think **the comparatively mild decline in this ratio projected for future decades will be a large burden**?¶ The reality is that the benefits from **even modest productivity growth swamp the negative impact of a declining ratio of workers to retirees**. This graph compares the benefits of productivity growth to the negative impact of the projected demographic change over the next two decades. ¶ ¶ Source: Author's calculations.¶ These calculations assume that retirees benefits are equal to 85 percent of the average wage, an amount that is much higher than is actually the case in the United States. It is also worth noting that 2035 is the worst possible year for demographics, since after that date the ratio of workers to retirees stabilizes for the rest of the century. On the other hand productivity keeps growing.¶ **Even in this worst year, in the worst case scenario where productivity growth averages just 1.0 percen**t (roughly the rate during the 1973-1995 slowdown**), the gains from productivity growth between now and 2035 will be more than three times as large as the burden from the decline in the ratio of workers to retirees**. In the case of 1.5 percent productivity growth, which is closer to what we have actually been seeing, the ratio of benefits to burden is 5 to 1. And, if we got back to our 2.0 percent golden age rate of productivity growth the ratio of benefits to burden would be over 7 to 1. In short, the arithmetic doesn't support the demographic disaster story.¶ There is a deeper issue on this one that just reflects a bizarre worldview. **Many of us have noticed global warming** and other ways in which the planet is straining from the impact of humans. As a general rule, **fewer people will mean less strain.** Why should we be troubled by a stagnant or declining population? It is especially bizarre that people claim this is a problem for Japan, which is a very densely populated country. ¶ It's true that **a declining population means that labor will be in shorter** supply. **That means that the least productive jobs will go unfilled**. That is the way economies develop and the reason that half of our workforce is no longer employed in agriculture. **In the U.S. this would mean that we might have fewer restauran**ts and the convenience stores won't be open all night. In Japan, perhaps they won't be able to find workers to shove people into the subway cars in Tokyo. What's the problem?¶ Klein is correct that the arguments he lays out tend not to be controversial in Washington policy circles. But this is not a very thoughtful group of people. Remember these are the people who could not see an $8 trillion housing bubble. They have not gotten any more curious or creative in their thinking in the last 5 years.¶ This is not to argue against immigration or immigration reform. The way we treat people who came to this country to work, in accordance with policy (sorry, the folks in Washington knew we had immigrants working in the country off the books -- this was policy) is an outrage and is bad for the economy. However readers deserve a more serious discussion of the issues involved.¶ Some immigration to the country undoubtedly provides economic benefits. However in nearly all cases there will be winners and losers. For example, a large flow of immigrants at the low-end of the labor force will hurt the people who have recently immigrated to the country. Some of us may not consider that a good thing. On the other hand, a large flow of very highly educated immigrants, such as doctors, can get the wages of these workers more in line with the wages of professionals in other wealthy countries and provide large savings in areas like health care. (This is a great way to go for people who are worried about those long-term deficit projections.)

**Immigration doesn’t solve aging**

**Camarota ‘05**

Steven is Director of Research at the Center for Immigration Studies, “Immigration in an Aging Society: Workers, Birth Rates, and Social Security,” <http://www.cis.org/AgingImmigrants-BirthRate-SocialSecurity>

**Many advocates of high immigration argue** that **it** fundamentally **changes the nation’s age structure**, and is very helpful in solving the problem of an aging society. Demographic **data**, however, **show that immigration has only a very small impact on the problem**. While immigrants do tend to arrive relatively young, and have higher fertility than natives, immigrants age just like everyone else, and the differences with natives are not large enough to fundamentally alter the nation’s age structure. The debate over immigration should focus on other areas where it actually has a significant effect.¶ Among this Backgrounder’s findings:¶ **In 2000 the average age of an immigrant was 39, which is** actually about **four years older than the average age** of a native-born American.¶ Even focusing on only recent immigration reveals little impact on aging. **Excluding all 22 million immigrants who arrived after 1980 from the 2000 Census increases the average age in the United States by only about four months**.¶ In 2000 66.2 percent of the population was of working-age (15 to 64). Excluding post-1980 immigrants it is 64.6 percent.¶ Looking at the full impact of post-1980 immigrants reveals that if they and all their U.S.-born children are not counted, the working-age share would have been 65.9 percent in 2000, almost exactly the same as the 66.20 percent when they are all included.¶ Immigration also does not explain the relatively high U.S. fertility rate. **In 2000 the U.S. fertility rate was 2.1 children per woman, compared to 1.4 for Europe, but if all immigrants are excluded the rate would still have been 2.0.**¶ Looking to the future, **Census Bureau projections indicate that if net immigration averaged 100,000 to 200,000 annually, the working age share would be 58.7 percent in 2060, while with net immigration of roughly 900,000 to one million, it would be 59.5 percent**.¶ Census projections are buttressed by Social Security Administration (SAA) estimates showing that, over the next 75 years, net annual legal immigration of 800,000 a year versus 350,000 would create a benefit equal to only 0.77 percent of the program’s projected expenditures.¶ It is not clear that even this tiny benefit exists, because SSA assumes legal immigrants will have earnings and resulting tax payments as high as natives from the moment they arrive, which is contrary to a large body of research.

### China

#### No CCP collapse—the government represses instability

Pei 9

(Minxin, Senior Associate in the China Program at the Carnegie Endowment for International Peace, 3/12. “Will the Chinese Communist Party Survive the Crisis?” Foreign Affairs. http://www.foreignaffairs.com/articles/64862/minxin-pei/will-the-chinese-communist-party-survive-the-crisis)

It might seem reasonable to expect that challenges from the disaffected urban middle class, frustrated college graduates, and unemployed migrants will constitute the principal threat to the party's rule. If those groups were in fact to band together in a powerful coalition, then the world's longest-ruling party would indeed be in deep trouble. But that is not going to happen. Such a revolutionary scenario overlooks two critical forces blocking political change in China and similar authoritarian political systems: the regime's capacity for repression and the unity among the elite. Economic crisis and social unrest may make it tougher for the CCP to govern, but they will not loosen the party's hold on power. A glance at countries such as Zimbabwe, North Korea, Cuba, and Burma shows that a relatively unified elite in control of the military and police can cling to power through brutal force, even in the face of abysmal economic failure. Disunity within the ruling elite, on the other hand, weakens the regime's repressive capacity and usually spells the rulers' doom. The CCP has already demonstrated its remarkable ability to contain and suppress chronic social protest and small-scale dissident movements. The regime maintains the People's Armed Police, a well-trained and well-equipped anti-riot force of 250,000. In addition, China's secret police are among the most capable in the world and are augmented by a vast network of informers. And although the Internet may have made control of information more difficult, Chinese censors can still react quickly and thoroughly to end the dissemination of dangerous news. Since the Tiananmen crackdown, the Chinese government has greatly refined its repressive capabilities. Responding to tens of thousands of riots each year has made Chinese law enforcement the most experienced in the world at crowd control and dispersion. Chinese state security services have applied the tactic of "political decapitation" to great effect, quickly arresting protest leaders and leaving their followers disorganized, demoralized, and impotent. If worsening economic conditions lead to a potentially explosive political situation, the party will stick to these tried-and-true practices to ward off any organized movement against the regime.

#### A. CCP collapse causes democratic transition

**Pei 07**

[Minxin, senior associate and co-director of the China Program at the Carnegie Endowment for International Peace, “How will china democratize”]

Given these mixed signals and trends, it might be premature to identify a specific timeframe within which China will become Free or even Partly Free. A more fruitful intellectual exercise might be to ask not when but how the Middle Kingdom could become Free. Here one might think of a process that is a variation on the theme of liberal evolution. In this scenario, the powerful forces of economic growth and social change converge, as modernization theory predicts they will do, to create promising conditions for the emergence of liberal democracy. Yet the promise goes unfulfilled, at least for a time, because the CCP's strategy of illiberal adaptation manages to stymie democratizing forces. With democratization bottled up, a crony-capitalist political economy takes hold and implants all the familiar developing-world ills of endemic corruption, poor governance, social polarization, and political decay. The resulting deadlock proves unsustainable. At some unspecified point, accumulated systemic risks and an unexpected shock jointly spark a huge political crisis that helps to break the equilibrium and—after other twists and turns, perhaps—ultimately precipitates a democratic transition.

#### B. Fast collapse is key- democratic transition is inevitable, but the CPP will tank China’s economy by drawing it out

**Gilley 07**

[Bruce, assistant professor of political studies at Queen's University in Canada. Journal of Democracy, “Is China Stuck”]

Assume it is not. In that case, the questions that Pei asks are the right ones. This brings us to the book's second proposition, which is that the Chinese transition is stalled or "trapped." The critical moment at which China turned the corner into a blind alley came in 1989, when the CCP regime crushed a democratic movement. This resulted in economic and political reforms in the 1990s that, by virtue of being wholly regime-managed, gave rise to deformative structures. The reforms kept the private sector small, denied legislative bodies and village governments true power, and allowed the state to become corrupt and inefficient. Democracy could not arise under such circumstances because popular pressures were either coopted or suppressed. Pei wrote in the October 1995 issue of the Journal of Democracy that democratic trends in China "appear to be accelerating," and that "[i]f they are allowed to continue, they will gradually lay the institutional foundations for the eventual democratization of China." Since then, he has proposed that the facts have changed—a view which he first mooted in a January 2003 article, also published in the Journal of Democracy. Now, four years later, China's Trapped Transition completes the volte face. Pei is right to draw attention to the costs of the slow transition. Indeed, the book's biggest contribution is to show that gradualism has been as costly to China as rapid reforms were to Eastern Europe and Russia (echoing Harvard sociologist Barrington Moore's famous argument about the comparative costs of democratization in Britain and [End Page 172] France). There is no easy way out of the damaging legacies of authoritarian rule. In China, as Pei shows, a corrupt CCP elite has kept a tight grip on political power and used it to deform the economy and weaken the state. This not only exacts costs now, but also imposes heavy burdens stretching into the future. China's partial transition is passing to future generations a bankrupt state; an economy with gaping, Latin American–sized inequalities; and a political culture prone to extremism and violence.

#### C. Chinese growth fuels economic integration with Taiwan- prevents independence

**Zhang 03** [Research Fellow @ Modern Asia Research Centre, Geneva. [Wei-Wei, Visiting Professor @ Fudan University, Shanghai “East Asian Regionalism: Implications for Cross-Strait Relations,” Taiwan and China in the Global Communities, A Multi-level Conference co-organized by EIAS, IIAS and SOAS, London (17 October 2003) and Leiden (21 October 2003) pg. chinatwzhang.pdf]

Given the prolonged political hostility between Beijing and Taipei, it is understandable that Taipei has its concerns over the rise of China, as Taiwan still perceives Beijing as its principal adversary bent on strangling its “international space” and taking it by force if need be. However, despite political animosity between the two sides, many Taiwanese, especially businessmen, view the rise of China more as an opportunity. Taiwanese businesses have poured as much as US$ 100 billion into the mainland over the last decade; more than 300,000 Taiwanese living and working in the Shanghai region alone, and recent years see over 3 million visits annually from Taiwan to the mainland, and since 2002, China has become Taiwan’s largest export market. This cross-Strait “informal integration” is in fact the most dynamic and significant part of the aforementioned Chinese Economic Area. In contrast, the current DPP government in Taiwan advocates the ideology of “Taiwan taking its own road” as a guideline for Taiwan to stay as far away as possible, economically, culturally and politically, from the Chinese mainland. It even openly embrace the idea of Taiwan’s independence through constitutional revisions. Yet, to what extent this pro- independence ideology and its associated policies will succeed is doubtful, given the deep- rooted cultural links, the rapid rise of China’s overall national strength, the growing de facto integration of the two economies, as well as the rising trend of East Asian regionalism. With globalization and international division of labour and logistics, Taiwan and China, favoured by historical and cultural ties, ought to seize every opportunity to enhance their mutually beneficial cooperation. Their common interest does not lie in political and military confrontation, but in pragmatic and mutually beneficial cooperation in as many areas as possible. Taipei’s prolonged policy of “no hurry, less haste” already cost Taiwan business community dearly in terms of losing its market share in China. The continuation of a similar policy, as is the case now, could further compromise Taiwan’s regional and international competitiveness. Furthermore, Taipei’s pro-independence posture is unlikely to alter the growing trend of East Asian regionalism centring around China, with ever more foreign countries busy tapping China’s market, nor will it stop capital and technology flow from Taiwan to the mainland. In fact, along with China’s entry into WTO, and East Asian drive for regional cooperation, Taiwanese businesses are rushing to the mainland for investment and trade opportunities. Some new trends are worth mentioning: (a) as China’s high-tech industry approaches a critical mass, Taiwan’s high-tech companies are expanding their investment in the mainland; (b) Taiwan’s investment has shifted from Fujian and Guangdong provinces near Taiwan to China’s economic centre: Shanghai and its sorrounding Yangtze River Delta: (c) Taiwan’s investment is shifting from labour-intensive to both labour intensive and knowledge-capital-intensive industries; (d) ever more Taiwanese big companies are coming to invest in the mainland, and (e) Taiwan businessmen are exerting unprecedented pressure on Taipei to abandon its policy of restricting China-bound investment and lift its ban on the “three direct links.” 11 Taiwan and the Chinese mainland share enormous common interests and reconciliation is the only way-out for the two sides. If Taiwan cannot make best use of the rise of China as part of its global strategy for greater competitiveness, Taiwan may risk being further marginalized against the trend of the China-centred regionalism in East Asia, a fear shared by many in Taiwan.

#### D. Taiwanese independence causes US-China war

**Lieber and Press, 07**

Keir and Daryl, The Atlantic Monthly, July/August, “Superiority Complex,” http://www.dartmouth.edu/~dpress/docs/Press\_Superiority\_Complex\_ATL.pdf

The most plausible flash point for a serious U.S.-China conflict is Taiwan. Suppose Taiwan declared independence. China has repeatedly warned that such a move would provoke an attack, probably a major air and naval campaign to shatter Taiwan’s defenses and leave the island vulnerable to conquest. If the United States decided to defend Taiwan, American forces would likely thwart China’s offensive, since aerial and naval warfare are strengths of the U.S. military. But looming defeat would place great pressure on China’s leaders. Losing the war might mean permanently losing Taiwan. This would undermine the domestic legitimacy of the Chinese Communist Party, which increasingly relies on the appeal of nationalism to justify its rule. A crippling defeat would also strain relations between political leaders in Beijing and the Chinese military. To stave off a regime-threatening disaster, the political leaders might decide to raise the stakes by placing part of the Chinese nuclear force on alert in hopes of coercing the United States into accepting a negotiated solution (for example, a return to Taiwan’s pre-declaration status).

#### Relations

#### A. CCP collapse key to US-China relations

Freidman 08

[Edward, professor in the Department of Political Science at the University of Wisconsin, Madison. China Review International vol. 15 #4]

Since Deng imagines China as merely seeking to be treated with dignity, he does not focus on the vengeful and irrational forces that persist in Chinese thinking, even if the nastiest elements of the nationalist discourse do not dominate. At the heart of Chinese politics, they remain a continuing threat to Deng Xiaoping's policy of seeking cooperation and not conflict with America. In fact, by December 2008 PRC president Hu Jintao relegated Deng Xiaoping's policies to the dustbin of history and concluded that now was the time for China to assert its superiority and to challenge the United states and the democracies globally. Deng's admonitions to the democracies that all they have to do is to treat the CCP regime with dignity do not seem to be sufficient advice for the dangerous tensions that may lie ahead. The work lacks a certain realism about the nastier forces of politics, especially international relations. Nonetheless, Deng brilliantly helps his readers understand why this rising and powerful authoritarian China experiences the world as unfairly organized by America and the other major democracies. Chinese leaders imagine themselves as defensively fending off anti-China forces. The CCP regime finds that the post–WWII order was structured by the United States to privilege democracy and human rights. Those American-created dynamics are imagined to have led to the collapse of the CCP regime in the Soviet Union, to the democratization of East and Central Europe, to the disintegration of the USSR, and to Russia's loss of superpower status, and also to the isolation of the PRC after the CCP, on 4 June 1989, bloodily crushed a nationwide democracy movement. It all seems an American plot aimed at the ruling groups in Beijing who have returned China to global glory. It seems very unfair. People in power in China have no intention of taking such guff any more.

#### B. US-China relations solve extinction

Wenzhong, 04

(Zhou Wenzhong, PRC Ministry of Foreign Affairs. 2-7-04. “Vigorously Pushing Forward the Constructive and Cooperative Relationship Between China and the United States,” http://china-japan21.org/eng/zxxx/t64286.htm)

China's development needs a peaceful international environment, particularly in its periphery. We will continue to play a constructive role in global and regional affairs and sincerely look forward to amicable coexistence and friendly cooperation with all other countries, theUnited State sincluded. We will continue to push for good-neighborliness, friendship and partnership and dedicate ourselves to peace, stability and prosperity in the region. Thus China's development will also mean stronger prospect of peace in the Asia-Pacific region and the world at large. China and the US should, and can, work together for peace, stability and prosperity in the region. Given the highly complementary nature of the two economies, China's reform, opening up and rising economic size have opened broad horizon for sustained China-US trade and economic cooperation. By deepening our commercial partnership, which has already delivered tangible benefits to the two peoples, we can do still more and also make greater contribution to global economic stability and prosperity. Terrorism, cross-boundary crime, proliferation of advanced weapons, and spread of deadly diseases pose a common threat to mankind. China and the US have extensive shared stake and common responsibility for meeting these challenges, maintaining world peace and security and addressing other major issues bearing on human survival and development. China is ready to keep up its coordination and cooperation in these areas with the USand the rest of the international community.

## 1AR

### China DA

**AND PAN HIMSELF ADMITS THAT CHINA THREAT CONSTRUCTION IS INEVITABLE AND REFLEXIVELY BASED ON CHINESE STATE BEHAVIOUR.**

**Moran 2k11**

[lee, pride of the fleet: china’ first aircraft carrier…”, <http://www.dailymail.co.uk/news/article-2024425/Chinas-aircraft-carrier-takes-seas--fuelling-fears-countrys-military-strength.html>]

The official state **Xinhua news agency** **added**: 'Building a strong navy that is commensurate with **China's rising status is a necessary step and an inevitable choice for the country** to safeguard its increasingly globalised national interests.'¶ But **Chengxin Pan, an expert on China at Deakin University in Australia, warned it could unsettle neighbouring countries.**¶ He said: 'For many neighbours, it may symbolise something different and more unsettling.¶ **'It is inevitable that neighbouring countries will react with some alarm, especially given recent disputes in the South China Sea** as well as the maritime incident between China and Japan last year.'¶ Refitting and test work will now continue on the carrier.¶ The Varyag, yet to be officially renamed, was towed from Ukraine in 2001 as an empty shell without engines, weapons systems or other crucial equipment.¶ Ashley Townshend, at the Lowy Institute for International Policy in Sydney, said China would need at least three carriers if it was 'serious' about having a viable carrier strike group.¶ He also said that it would have to develop support ships and aircraft for any carrier group, which could take ten years.¶ China's neighbours India and Thailand already have aircraft carriers, and Australia has ordered two multi-purpose carriers. The United States operates 11.¶ The former chief of the Philippine's navy Admiral Ferdinand Golez said his country should not be worried by the development. He said: 'The Philippines should not be concerned with this development.¶ 'An aircraft carrier is an offensive tool but I don't think China has the intention to use it to bully its neighbours.'¶ Before the launch, a Pentagon spokesman played down the likelihood of any immediate leaps from China's carrier programme. ¶ But that is just one part of China's naval modernisation drive, which has forged ahead while other powers tighten their military budgets to cope with debt woes. ¶ China has been building new submarines, surface ships and anti-ship ballistic missiles as part of its naval modernisation, which has triggered regional jitters that have fed into long-standing territorial disputes, and could speed up military expansion across Asia.¶ In the past year, China has had run-ins at sea with Japan, Vietnam and the Philippines. The incidents - boat crashes and charges of territorial incursions - have been minor, but the diplomatic reaction often heated. ¶ Chengxin **Pan added: 'Overall, the perception of a rapidly rising and potentially threatening China is likely to be reinforced and Beijing will face enormous challenges in dispelling such a perception.**'

**Our reps of China are correct—they’re key to long-term cooperation**

**Blumenthal 10—current commissioner and former vice chairman of the U.S.-China Economic and Security Review Commission at AEI, J.D., Duke Law School M.A., School of Advanced International Studies, Johns Hopkins University B.A., Washington University Chinese language studies, Capital Normal University—AND—Michael Mazza, program manager for AEI's annual Executive Program on National Security Policy and Strategy, M.A., international relations (strategic studies and international economics), Paul H. Nitze School of Advanced International Studies (SAIS), Johns Hopkins University Inter-university Program for Chinese Language Studies, Tsinghua University, Beijing, China B.A., history, Cornell University (Dan, NBR Analysis, December 2010, “Sino-U.S. Competition and U.S. Security: How Do We Assess the Military Balance?,” RBatra)**

**Why Study a Sino-U.S. Military Balance?**

**Since the end of the Cold War, a broad consensus has emerged among policymakers and analysts that Asia is becoming the center of power in world affairs. As Asia’s prominence grows, so do U.S. interests in the region. Scholars and policymakers all agree that both the manner in which China becomes a great power and the way it exercises power is central to Asia’s future. At the same time, many have recognized that China’s growing military capabilities could disrupt the region’s ongoing peaceful transformation. Thus, U.S. policy has been based on two broad impulses. Washington seeks cooperative relations to integrate China into the international system, and it has sought to hedge against or balance China’s growing military might. Sino-U.S. relations are thus characterized by elements of cooperation and competition, which U.S. policy must balance. While this may be counterintuitive, if the United States maintains a favorable balance of power, it is more likely to have cooperative relations with Beijing.**

**The United States can only compete, however, if it knows over what it is competing. This in turn requires an understanding of the dynamic Sino-U.S. military balance. A clearer picture of how U.S. military forces measure up against China’s should be the basis for a sound policy. Knowledge of the military balance can help policymakers with both the cooperative and the competitive elements of the relationship with China.2 On the competitive side, presidents and their advisors can better assess how to adjust the U.S. force posture to balance China’s growing power and reassure allies that China will not dominate Asia. In doing so, they can help the world’s most rapidly growing region avoid costly, perhaps even uncontrollable (and nuclear), arms races and conflicts. On the cooperative side, a sense of where the country stands in a competition with China could help U.S. leaders decide when to accommodate Beijing in ways that would not harm national security. Once we know what really matters, in all likelihood, we will be less worried about some Chinese capabilities.**

#### A. CCP collapse is key to US-China cooperation over North Korea

Shambaugh 03

[David, professor of political science and international affairs and director of the China Policy Program at the Elliott School of International Affairs, George Washington University; a nonresident senior fellow in the Foreign Policy Studies Program at the Brookings Institution; and a 2002-2003 fellow at the Woodrow Wilson International Center for Scholars in Washington, D.C. The Washington Quarterly, “China and the Korean Peninsula”]

It is true that the Chinese Communist Party (CCP) and its North Korean counterpart have had long-standing ties and that the late Kim Il-sung was educated in China and was once a member of the CCP. It is also true that the two countries once had a formalalliance and mutually described their relationship as one of "lips and teeth." And it is true that China probably has better [End Page 43] relations with the Democratic People's Republic of Korea (DPRK) than any other country on Earth. Despite these facts, however, the relationship between Beijing and Pyongyang has been severely strained for many years, particularly since Kim Jung-il succeeded his father in 1995. Thus, from Beijing's perspective, the current crisis over North Korea's withdrawal from the 1994 Agreed Framework and the Nuclear Non-Proliferation Treaty, as well as the DPRK's resumption of its nuclear weapons program, is only the latest chapter in a half-century of North Korean brinksmanship brought on by domestic desperation and disregard for its neighbors' interests and preferences. Beijing considers the latest crisis an extremely serious situation, but permanently short-circuiting Pyongyang's nuclear ambitions is only a piece of a larger and more complicated puzzle for China. Despite China's strong and long-stated policy in favor of a nonnuclear Korean peninsula (both North and South), halting North Korea's nuclear program is not the ultimateend that China hopes to achieve. China's calculations, interests, and goals are more long term and more complicated. The United States and other involved nations must understand these perspectives and complexities if they are to effectively attain China's cooperation.

#### B. China’s cooperation is key to solve North Korean denuclearization and aggression

Xu 01

[Xianquan Xu, Senior Research Fellow, Chinese Academy, International Trade and Economic Cooperation, CHINA, THE UNITED STATES, AND THE GLOBAL ECONOMY, 2001, p.

268]

In terms of security and stability in Northeast Asia, outstanding is North Korea and its nuclear weapon and ballistic missile capabilities. Moreover, North Korea is heavily armed with over one million troops and has also developed other weapons of mass destruction, such as chemical weapons. North Korea's ideological isolation and economic failure heighten the risk for a military miscalculation. Although dialogue and negotiations with North Korea have increased in recent years, North Korea in general remains one of the most uncertain and explosive regimes in the world. While having much less influence over Pyongyang than most of Kim II Sung's time, China has been critical in averting a second conflict on the Peninsula, China explic­itly opposes any military action from the south against the north, and China still holds the most influence over North Korea in any major crisis. Therefore, although the United States has been making the most initiatives on security issues with North Korea**, China's support and cooperation remains crucial to any lasting success.** Such joint diplomacy should include resolving questions about Pyongyang's nuclear program, persuading North Korea to halt further missile testing, and coordinating humanitarian relief. As members of the Four Party Talks on Korean security, the United States and China should continue their cooperation in dissuading North Korea from obstructing progress or from bolting from the process altogether. The talks remain one of the most important channels to diffuse ten­sions between North and South Korea—a near-term interest that Washington and Beijing share.

#### C. The impact is nuclear war

Chol 2

Kim Chol, The Agreed Framework is Brain Dead, 2002, p. http://www.nautilus.org/fora/security/0212A\_Chol.html

The second choice is for the Americans to initiate military action to knock out the nuclear facilities in North Korea. Without precise knowledge of the location of those target facilities, the American policy planners face the real risk of North Korea launching a full-scale war against South Korea, Japan and the U.S. The North Korean retaliation will most likely leave South Korea and Japan totally devastated with the Metropolitan U.S. being consumed in nuclear conflagration. Looking down on the demolished American homeland, American policy planners aboard a special Boeing jets will have good cause to claim, "We are winners, although our homeland is in ashes. We are safely alive on this jet." The third and last option is to agree to a shotgun wedding with the North Koreans. It means entering into package solution negotiations with the North Koreans, offering to sign a peace treaty to terminate the relations of hostility, establish full diplomatic relations between the two enemy states, withdraw the American forces from South Korea, remove North Korea from the list of axis of evil states and terrorist-sponsoring states, and give North Korea most favored nation treatment. The first two options should be sobering nightmare scenarios for a wise Bush and his policy planners. If they should opt for either of the scenarios, that would be their decision, which the North Koreans are in no position to take issue with. The Americans would realize too late that the North Korean mean what they say. The North Koreans will use all their resources in their arsenal to fight a full-scale nuclear exchange with the Americans in the last war of ~~man~~kind. A nuclear-armed North Korea would be most destabilizing in the region and the rest of the world in the eyes of the Americans. They would end up finding themselves reduced to a second-class nuclear power.

### Politics

#### 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

# Round 4 v KU DS

## 1AC

### Plan

**The United States federal government should obtain, through alternative financing, electricity from small modular reactors for military bases in the United States.**

### Grid Adv

**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 U**nited **S**tates **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 U**nited **S**tates **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 U**nited **S**tates 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 U**nited **S**tates, **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 executedthese 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.\

**Grid will go down for months - multiple scenarios**

**Slavo 7/12**

(Mac is editor of shftplan, “UPDATE: Cascading Grid Crash: Now 600 Million Without Power in India (Are We Vulnerable?)” <http://www.shtfplan.com/headline-news/paralysis-grid-down-in-india-370-million-left-without-power_07302012>, SEH)

**The power grid in the United States**, while more advanced and apparently better maintained, **is** also **under excessive strain as has been witnessed in recent years with rolling brownouts, blackouts, and unforeseen crashes** resulting from key component failure.¶ **One industry insider** who has worked in the utility industry for nearly two decades **advised** this author recently **that it wouldn’t take much to bring down the system even in the United States**, potentially affecting tens of millions of customers. Though it’s the 21st century, many grid components in operation are, in some cases, as much as 40 years old, thus replacement parts are almost impossible to find. Other components, like massive transformers may take weeks or months to replace. In the event of a scenario where multiple components are targeted simultaneously, by either a man-made EMP or natural event, it is not too far of a stretch to suggest that the afflicted regions would be engulfed in pandemonium.¶ **This potential for widespread failure is so plausible that former Congressman** Roscoe Bartlett, **who has spoken on the vulnerabilities of the US power grid, has advised that Those Who Can, Should Move Their Families Out Of the City**:¶ After Hurricane Ike passed through the Houston area 2008 some 90% of the metropolitan was without power. While hospitals, police and critical infrastructure was restored within a few days, residents in outlying suburban areas experienced the outage for over three weeks. We witnessed the rapid loss of patience, increased anxiety and frustration, and the subsequent breakdown of interpersonal interaction at high-demand venues such as gas stations, where long lines, screaming matches and even fist fights became a common occurrence.¶ **The bottom line: As demonstrated in India today**, Quebec in 1989 (caused by a geo-magnetic storm originating from the sun), Ike in 2008, Hurricane Irene on the East coast in 2012 and the plethora of incidents that have taken place over the last couple of decades, **the North American power grid,** just as India’s, **is susceptible to far-from-equilibrium situations, and sometimes it takes extended periods of time to get power up and running**.¶ **With just three major grids running the United States**, **our dependence on massive flows of electricity to power** our home air conditioners, food refrigeration, communications, water and gas pump systems, and daily business operations **could come to a screeching halt should the grid ever be struck by a natural disaster like a** solar coronal mass ejection or **a large-scale earthquake** in California or on the Madrid fault. Likewise, as we’ve noted previously, **rogue organizations looking to wreak havoc have already demonstrated the staggering security holes in our power**, water and oil **grid infrastructure, with leading cyber security firms noting that it is just a matter of time before disaster strikes.**¶ While a short-term, isolated metropolitan outage can be dealt with by sourcing labor and supplies from unaffected areas of the country, **considering that the US operates on three key power grid systems, a region-wide outage affecting just one of these nodes could lead to a cascading breakdown in the electrical power system that envelops the entire country**.¶ **The most dangerous possibility emerges when we look at threats posed by** the sun or **a rogue terror cell or** nation that could deploy **an** Electro-Magnetic Pulse weapon (**EMP /** Super EMP) over American skies**. It’s been surmised that** either one of **these** possibilities **could cause damage so staggering that the grid would be down for months,** leaving millions without just-in-time food and gas delivery systems, medical care, local emergency response, or even clean water. According to one estimate, some 90% of Americans would die in such a scenario if the power wasn’t restored within one year.¶ Thus, it is clear that our power grids are a critical lifeline to keeping life as we know it in the world today operational. And, as we have seen historically and India this morning, power grids can and do crash – even in countries with hundreds of millions of residents.

**Cyber-attack is coming ---actors are probing 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.

#### SMRs solve – makes bases resilient and deters attacks – alternatives 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)

Small Reactors and Energy Security¶ The DOD interest in small reactors derives largely from problems with base and logistics vulnerability. Over the last few years, the Services have begun to reexamine virtually every aspect of how they generate and use energy with an eye toward cutting costs, decreasing carbon emissions, and reducing energy-related vulnerabilities. These actions have resulted in programs that have significantly reduced DOD energy consumption and greenhouse gas emissions at domestic bases. Despite strong efforts, however, two critical security issues have thus far **proven resistant to existing solutions**: bases’ vulnerability to civilian power outages, and the need to transport large quantities of fuel via convoys through hostile territory to forward locations. Each of these is explored below.¶ 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 the vast 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.

**Microgrid exacerbates vulnerability**

**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**.

#### Scenario 1 is Command and Control

**Grid attacks take out C and C – causes relation and nuclear war**

**Tilford 12**

Robert, Graduate US Army Airborne School, Ft. Benning, Georgia, “Cyber attackers could shut down the electric grid for the entire east coast” 2012, <http://www.examiner.com/article/cyber-attackers-could-easily-shut-down-the-electric-grid-for-the-entire-east-coa>

To make matters worse **a cyber attack that can take out a civilian power grid, for example could also cripple the U.S. military.**¶ The senator notes that is that the same power grids that supply cities and towns, stores and gas stations, cell towers and heart monitors also power “every military base in our country.”¶ “Although bases would be prepared to weather a short power outage with **backup diesel generators, within hours, not days, fuel supplies would run out”**, he said.¶ Which means military **command and control centers could go dark**.¶ **Radar systems that detect air threats** to our country **would shut Down completely**.¶ “**Communication between commanders and their troops would also go silent. And many weapons systems would be left without either fuel or electric power”,** said Senator Grassley.¶ “**So in a few short hours or days, the mightiest military in the world would be left scrambling to maintain base functions**”, he said.¶ We contacted the Pentagon and officials confirmed the threat of a cyber attack is something very real.¶ Top national security officials—including the Chairman of the Joint Chiefs, the Director of the National Security Agency, **the Secretary of Defense, and the CIA Director— have said, “preventing a cyber attack and improving the nation’s electric grids is among the most urgent priorities of our country”** (source: Congressional Record).¶ So how serious is the Pentagon taking all this?¶ Enough to start, or end a war over it, for sure (see video: Pentagon declares war on cyber attacks http://www.youtube.com/watch?v=\_kVQrp\_D0kY&feature=relmfu ).¶ **A cyber attack today against the US could very well be seen as an “Act of War” and could be met with a “full scale” US military response.**¶ That could include the use **of “nuclear weapons**”, if authorized by the President.

**Grid failure wrecks US critical mission operations**

**Stockton 11** Paul, assistant secretary of defense for Homeland Defense and Americas’ Security Affairs, “Ten Years After 9/11: Challenges for the Decade to Come”, <http://www.hsaj.org/?fullarticle=7.2.11>

The cyber threat to the DIB is only part of a much larger challenge to DoD. Potential adversaries are seeking asymmetric means to cripple our force projection, warfighting, and sustainment capabilities, by targeting the critical civilian and defense supporting assets (within the United States and abroad) on which our forces depend. This challenge is not limited to man-made threats; DoD must also execute its mission-essential functions in the face of disruptions caused by naturally occurring hazards.20 Threats and hazards to DoD mission execution include incidents such as earthquakes, naturally occurring pandemics, solar weather events, and industrial accidents, as well as kinetic or virtual attacks by state or non-state actors. Threats can also emanate from insiders with ties to foreign counterintelligence organizations, homegrown terrorists, or individuals with a malicious agenda. From a DoD perspective, this global convergence of unprecedented threats and hazards, and vulnerabilities and consequences, is a particularly problematic reality of the post-Cold War world. Successfully deploying and sustaining our military forces are increasingly a function of interdependent supply chains and privately owned infrastructure within the United States and abroad, including transportation networks, cyber systems, commercial corridors, communications pathways, and energy grids. This infrastructure largely falls outside DoD direct control. Adversary actions to destroy, disrupt, or manipulate this highly vulnerable homeland- and foreign-based infrastructure may be relatively easy to achieve and extremely tough to counter. Attacking such “soft,” diffuse infrastructure systems could significantly affect our military forces globally – potentially blinding them, neutering their command and control, degrading their mobility, and isolating them from their principal sources of logistics support. The Defense Critical Infrastructure Program (DCIP) under Mission Assurance seeks to improve execution of DoD assigned missions to make them more resilient. This is accomplished through the assessment of the supporting commercial infrastructure relied upon by key nodes during execution. By building resilience into the system and ensuring this support is well maintained, DoD aims to ensure it can "take a punch as well as deliver one."21 It also provides the department the means to prioritize investments across all DoD components and assigned missions to the most critical issues faced by the department through the use of risk decision packages (RDP).22 The commercial power supply on which DoD depends exemplifies both the novel challenges we face and the great progress we are making with other federal agencies and the private sector. Today’s commercial electric power grid has a great deal of resilience against the sort of disruptive events that have traditionally been factored into the grid’s design. Yet, the grid will increasingly confront threats beyond that traditional design basis. This complex risk environment includes: disruptive or deliberate attacks, either physical or cyber in nature; severe natural hazards such as geomagnetic storms and natural disasters with cascading regional and national impacts (as in NLE 11); long supply chain lead times for key replacement electric power equipment; transition to automated control systems and other smart grid technologies without robust security; and more frequent interruptions in fuel supplies to electricity-generating plants. These risks are magnified by globalization, urbanization, and the highly interconnected nature of people, economies, information, and infrastructure systems. The department is highly dependent on commercial power grids and energy sources. As the largest consumer of energy in the United States, DoD is dependent on commercial electricity sources outside its ownership and control for secure, uninterrupted power to support critical missions. In fact, approximately 99 percent of the electricity consumed by DoD facilities originates offsite, while approximately 85 percent of critical electricity infrastructure itself is commercially owned. This situation only underscores the importance of our partnership with DHS and its work to protect the nation’s critical infrastructure – a mission that serves not only the national defense but also the larger national purpose of sustaining our economic health and competitiveness. DoD has traditionally assumed that the commercial grid will be subject only to infrequent, weather-related, and short-term disruptions, and that available backup power is sufficient to meet critical mission needs. As noted in the February 2008 Report of the Defense Science Board Task Force on DoD Energy Strategy, “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.”23 Similarly, a 2009 GAO Report on Actions Needed to Improve the Identification and Management of Electrical Power Risks and Vulnerabilities to DoD Critical Assets stated that DoD mission-critical assets rely primarily on commercial electric power and are vulnerable to disruptions in electric power supplies.24 Moreover, these vulnerabilities may cascade into other critical infrastructure that uses the grid – communications, water, transportation, and pipelines – that, in turn, is needed for the normal operation of the grid, as well as its quick recovery in emergency situations. To remedy this situation, the Defense Science Board (DSB) Task Force recommended that DoD take a broad-based approach, including a focused analysis of critical functions and supporting assets, a more realistic assessment of electricity outage cause and duration, and an integrated approach to risk management that includes greater efficiency, renewable resources, distributed generation, and increased reliability. DoD Mission Assurance is designed to carry forward the DSB recommendations. Yet, for a variety of reasons – technical, financial, regulatory, and legal – DoD has limited ability to manage electrical power demand and supply on its installations. As noted above, DHS is the lead agency for critical infrastructure protection by law and pursuant to Homeland Security Presidential Directive 7. The Department of Energy (DOE) is the lead agency on energy matters. And within DoD, energy and energy security roles and responsibilities are distributed and shared, with different entities managing security against physical, nuclear, and cyber threats; cost and regulatory compliance; and the response to natural disasters. And of course, production and delivery of electric power to most DoD installations are controlled by commercial entities that are regulated by state and local utility commissions. The resulting paradox: DoD is dependent on a commercial power system over which it does not – and never will – exercise control.

**Loss of mission effectiveness causes nuclear war in every hotspot**

**Kagan and O’Hanlon 7** Frederick, resident scholar at AEI and Michael, senior fellow in foreign policy at Brookings, “The Case for Larger Ground Forces”, April 2007, http://www.aei.org/files/2007/04/24/20070424\_Kagan20070424.pdf

We live at a time when wars not only rage in nearly every region but threaten to erupt in many places where the current relative calm is tenuous. To view this as a strategic military challenge for the United States is not to espouse a specific theory of America’s role in the world or a certain political philosophy. Such an assessment flows directly from the basic bipartisan view of American foreign policy makers since World War II that overseas threats must be countered before they can directly threaten this country’s shores, that the basic stability of the international system is essential to American peace and prosperity, and that no country besides the United States is in a position to lead the way in countering major challenges to the global order. Let us highlight the threats and their consequences with a few concrete examples, emphasizing those that involve key strategic regions of the world such as the Persian Gulf and East Asia, or key potential threats to American security, such as the spread of nuclear weapons and the strengthening of the global Al Qaeda/jihadist movement. The Iranian government has rejected a series of international demands to halt its efforts at enriching uranium and submit to international inspections. What will happen if the US—or Israeli—government becomes convinced that Tehran is on the verge of fielding a nuclear weapon? North Korea, of course, has already done so, and the ripple effects are beginning to spread. Japan’s recent election to supreme power of a leader who has promised to rewrite that country’s constitution to support increased armed forces—and, possibly, even nuclear weapons— may well alter the delicate balance of fear in Northeast Asia fundamentally and rapidly. Also, in the background, at least for now, Sino Taiwanese tensions continue to flare, as do tensions between India and Pakistan, Pakistan and Afghanistan, Venezuela and the United States, and so on. Meanwhile, the world’s nonintervention in Darfur troubles consciences from Europe to America’s Bible Belt to its bastions of liberalism, yet with no serious international forces on offer, the bloodletting will probably, tragically, continue unabated. And as bad as things are in Iraq today, they could get worse. What would happen if the key Shiite figure, Ali al Sistani, were to die? If another major attack on the scale of the Golden Mosque bombing hit either side (or, perhaps, both sides at the same time)? Such deterioration might convince many Americans that the war there truly was lost—but the costs of reaching such a conclusion would be enormous. Afghanistan is somewhat more stable for the moment, although a major Taliban offensive appears to be in the offing. Sound US grand strategy must proceed from the recognition that, over the next few years and decades, the world is going to be a very unsettled and quite dangerous place, with Al Qaeda and its associated groups as a subset of a much larger set of worries. The only serious response to this international environment is to develop armed forces capable of protecting America’s vital interests throughout this dangerous time**. Doing so requires a military capable of a wide range of missions**—including not only deterrence of great power conflict in dealing with potential hotspots in Korea, the Taiwan Strait, and the Persian Gulf but also associated with a variety of Special Forces activities and stabilization operations. For today’s US military, which already excels at high technology and is increasingly focused on re-learning the lost art of counterinsurgency, this is first and foremost a question of finding the resources to field a large-enough standing Army and Marine Corps to handle personnel intensive missions such as the ones now under way in Iraq and Afghanistan. Let us hope there will be no such large-scale missions for a while. But preparing for the possibility, while doing whatever we can at this late hour to relieve the pressure on our soldiers and **Marines** in ongoing operations, is prudent. At worst, the only potential downside to a major program to strengthen the military is the possibility of spending a bit too much money. **Recent history shows no link between having a larger military and its overuse**; indeed, Ronald Reagan’s time in office was characterized by higher defense budgets and yet much less use of the military, an outcome for which we can hope in the coming years, but hardly guarantee. While the authors disagree between ourselves about proper increases in the size and cost of the military (with O’Hanlon preferring to hold defense to roughly 4 percent of GDP and seeing ground forces increase by a total of perhaps 100,000, and Kagan willing to devote at least 5 percent of GDP to defense as in the Reagan years and increase the Army by at least 250,000), we agree on the need to start expanding ground force capabilities by at least 25,000 a year immediately. Such a measure is not only prudent, it is also badly overdue.

**We control empirics**

**Wohlforth 8—**Daniel Webster Professor of Government, Dartmouth. BA in IR, MA in IR and MPhil and PhD in pol sci, Yale (William, Unipolarity, Status Competition, and Great Power War, October 2008, World Politics Vol. 61, Iss. 1; pg. 28, 31 pgs, Proquest)

Despite increasingly compelling findings concerning the importance of status seeking in human behavior, research on its connection to war waned some three decades ago.38 Yet empirical studies of the relationship between both systemic and dyadic capabilities distributions and war have continued to cumulate. If the relationships implied by the status theory run afoul of well-established patterns or general historical findings, then there is little reason to continue investigating them. **The clearest empirical implication** of the theory **is that** status **competition is unlikely to cause great power military conflict in unipolar systems**. If status competition is an important contributory cause of great power war, then, ceteris paribus, unipolar systems should be markedly less war-prone than bipolar or multipolar systems. And this appears to be the case. As Daniel Geller notes in a review of the empirical literature: "**The only polar structure that appears to influence conflict probability is unipolarity**."39 In addition, a larger number of studies at the dyadic level support the related expectation that narrow capabilities gaps and ambiguous or unstable capabilities hierarchies increase the probability of war.40 These studies are based entirely on post-sixteenth-century European history, and most are limited to the post-1815 period covered by the standard data sets. Though the systems coded as unipolar, near-unipolar, and hegemonic are all marked by a high concentration of capabilities in a single state, these studies operationalize unipolarity in a variety of ways, often very differently from the definition adopted here. An ongoing collaborative project looking at ancient interstate systems over the course of two thousand years suggests that historical systems that come closest to the definition of unipolarity used here exhibit precisely the behavioral properties implied by the theory. 41 As David C. Kang's research shows, the East Asian system between 1300 and 1900 was an unusually stratified unipolar structure, with an economic and militarily dominant China interacting with a small number of geographically proximate, clearly weaker East Asian states.42 Status politics existed, but actors were channeled by elaborate cultural understandings and interstate practices into clearly recognized ranks. Warfare was exceedingly rare, and the major outbreaks occurred precisely when the theory would predict: when China's capabilities waned, reducing the clarity of the underlying material hierarchy and increasing status dissonance for lesser powers. Much more research is needed, but initial exploration of other arguably unipolar systems-for example, Rome, Assyria, the Amarna system-appears consistent with the hypothesis.43 Status Competition and Causal Mechanisms Both theory and evidence demonstrate convincingly that competition for status is a driver of human behavior, and social identity theory and related literatures suggest the conditions under which it might come to the fore in great power relations. Both the systemic and dyadic findings presented in large-N studies are broadly consistent with the theory, but they are also consistent with power transition and other rationalist theories of hegemonic war.

**US will pursue hegemonic strategy- the question is efficacy**

**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.

**No offense – fast collapse causes lash-out**

**Goldstein ‘07**

(Avery, Professor of Global Politics and International Relations @ University of Pennsylvania, “Power transitions, institutions, and China's rise in East Asia: Theoretical expectations and evidence,” Journal of Strategic Studies, Volume 30, Issue 4 & 5 August)

Two closely related, though distinct, theoretical arguments focus explicitly on the consequences for international politics of a shift in power between a dominant state and a rising power. In War and Change in World Politics, Robert Gilpin suggested that **peace prevails when a dominant state’s capabilities enable it to ‘govern’** an international order that it has shaped. Over time, however, **as** economic and technological diffusion proceeds during eras of peace and development, **other states are empowered**. Moreover, the burdens of international governance drain and distract the reigning hegemon, **and challengers** eventually **emerge** who seek to rewrite the rules of governance. As the power advantage of the erstwhile hegemon ebbs, **it may become desperate enough to resort to** the ultima ratio of international politics, **force, to forestall the increasingly urgent demands of a rising challenger**. Or as the power of the challenger rises, it may be tempted to press its case with threats to use force. It is **the** rise and **fall of** the **great powers** that **creates** the circumstances under which major wars, what Gilpin labels ‘**hegemonic wars’**, break out.13 Gilpin’s argument logically encourages pessimism about the implications of a rising China. It leads to the expectation that international trade, investment, and technology transfer will result in a steady diffusion of American economic power, benefiting the rapidly developing states of the world, including China. As the US simultaneously scurries to put out the many brushfires that threaten its far-flung global interests (i.e., the classic problem of overextension), it will be unable to devote sufficient resources to maintain or restore its former advantage over emerging competitors like China. **While the erosion of the once clear American advantage plays itself out, the US will find it ever more difficult to preserve** the **order** in Asia that it created during its era of preponderance. The expectation is an increase in the likelihood for the use of force – either by a Chinese challenger able to field a stronger military in support of its demands for greater influence over international arrangements in Asia, or by a besieged American hegemon desperate to head off further decline. Among the trends that alarm those who would look at Asia through the lens of Gilpin’s theory are **China’s expanding share of** world trade and **wealth** (much of it resulting from the gains made possible by the international economic order a dominant US established); its **acquisition of technology in key sectors that have** both civilian and **military applications** (e.g., information, communications, and electronics linked with the ‘revolution in military affairs’); **and** an **expanding military burden for the US** (as it copes with the challenges of its global war on terrorism and especially its struggle in Iraq) that limits the resources it can devote to preserving its interests in East Asia.14 Although similar to Gilpin’s work insofar as it emphasizes the importance of shifts in the capabilities of a dominant state and a rising challenger, the power-transition theory A. F. K. Organski and Jacek Kugler present in The War Ledger focuses more closely on the allegedly dangerous phenomenon of ‘crossover’– the point at which a dissatisfied challenger is about to overtake the established leading state.15 In such cases, **when the power gap narrows, the dominant state becomes increasingly desperate to forestall, and the challenger becomes increasingly determined to realize the transition to a new international order whose contours it will define.** Though suggesting why a rising China may ultimately present grave dangers for international peace when its capabilities make it a peer competitor of America, Organski and Kugler’s power-transition theory is less clear about the dangers while a potential challenger still lags far behind and faces a difficult struggle to catch up. This clarification is important in thinking about the theory’s relevance to interpreting China’s rise because **a broad consensus prevails** among analysts **that Chinese military capabilities are at a minimum two decades from putting it in a league with the US** in Asia.16 Their **theory**, then, **points with alarm to trends in China’s growing wealth and power relative to the U**nited **S**tates, but especially looks ahead to what it sees as the period of maximum danger – that time when a dissatisfied China could be in a position to overtake the US on dimensions believed crucial for assessing power. Reports beginning in the mid-1990s that offered extrapolations suggesting China’s growth would give it the world’s largest gross domestic product (GDP aggregate, not per capita) sometime in the first few decades of the twentieth century fed these sorts of concerns about a potentially dangerous challenge to American leadership in Asia.17 **The huge gap between Chinese and American military capabilities** (especially in terms of technological sophistication) **has** so far **discouraged prediction of comparably disquieting trends on this dimension, but inklings of similar concerns may be reflected in occasionally alarmist reports about purchases of** advanced **Russian air and naval equipment, as well as concern that Chinese espionage may have undermined the American advantage** in nuclear and missile technology, and speculation about the potential military purposes of China’s manned space program.18 Moreover, **because a dominant state may react to the prospect of a crossover and believe that it is wiser to embrace the logic of preventive war and act early to delay a transition while the task is more manageable**, Organski and Kugler’s powertransition theory also provides grounds for concern about the period prior to the possible crossover.19

#### Scenario 2 is Alaska

#### SMRs key to island Alaskan bases from outages

Holdmann, 11

(Director of Alaska Center for Energy and Power-University of Alaska Fairbanks, “Small Scale Modular Nuclear Power: an option for Alaska,” http://www.uaf.edu/files/acep/Executive-Summary-3-2-11.pdf)

Executive Summary Alaska is home to some of the most abundant supplies of fossil fuels and renewable energy resources on the planet. While the Alaska treasury benefits financially from development of these resources for export, the supply of reliable, affordable energy to small and often isolated Alaska markets remains a challenge. These conditions result in energy prices for space heating and electricity that are volatile and expensive in many areas of the state. These high energy prices are a significant burden for Alaska residents and businesses and stifle economic development. Ways to address high energy prices are being deliberated, including the possible construction of one of several proposed natural gas pipeline projects, funding of individual projects in rural communities with access to developable resources, and consideration of a large-scale hydroelectric project to serve the Railbelt. Another possible source of energy is nuclear power. Why discuss the nuclear option? With Alaska’s abundant energy resources, this form of energy might not seem needed. However, Alaska’s resources are not equitably distributed geographically, with some areas located near energy sources (for example, the gas fields of Cook Inlet that supply energy for Anchorage), and many other areas less fortunate. In particular, communities in rural Alaska face very high energy prices due to reliance on imported diesel fuel, and many do not have access to developable local resources that can appreciably reduce this dependence. To a lesser degree, the Fairbanks area also lacks low-cost, locally abundant energy resources. It is possible that the new small-scale modular nuclear power plants could lower the cost of energy in some of these locations. Alaska was not part of the first wave of nuclear power development in the U.S., as the nation’s existing commercial nuclear industry is comprised of 1000 MW reactors that are too large for any Alaska applications. However, as part of a new generation of nuclear power plants worldwide, small modular reactors (SMRs) are being developed that range in size from 10 MWe to 300 MWe. These SMRs would be manufactured in factories, allowing standardized design and fabrication, high quality control, shorter power facility construction times, and reduced finance charges during construction. In larger markets in the Lower 48, multiple SMR modules could be combined to form a single gigawatt-scale power plant, which would have several advantages over a single large reactor, including reduced downtime for maintenance and improved safety. These SMRs would also be appropriately sized for use in Alaska, making nuclear energy a viable option to consider. In addition **to providing energy** (heat and power) for rural communities and/or the Railbelt, other potential applications include providing energy **to military bases,** remote mining operations, and other industrial users

#### Alaskan bases key to deter Arctic conflict

Dowd, 11

(MA-Indiana University, Senior Fellow of the Fraser Institute, “The Big Chill: Energy Needs Fueling Tensions in the Arctic,” https://www.fraserinstitute.org/research-news/news/display.aspx?id=2147483979)

One reason a military presence will be necessary is the possibility of accidents caused by drilling and shipping. In addition, competition for Arctic resources could lead to confrontation. Adm. James Stavridis, who serves as NATO’s military commander, concedes that the **Arctic could become “a zone of conflict**” (UPI). To brace for that possibility and thwart Russia’s Arctic fait accompli, the United States, Canada, Denmark and Norway—all NATO members and Arctic nations—should follow the Cold War playbook: build up the assets needed to defend their interests, use those assets to deter aggression, and deal with Moscow from a posture of strength and unity. The challenge is to remain open to cooperation while bracing for worst-case scenarios. After all, Russia is not the Soviet Union. Even as Putin and his puppets make mischief, Moscow is open to making deals. Russia and Norway, for instance, recently resolved a long-running boundary dispute, paving the way for development in 67,000 square-miles of the Arctic. Moreover, the U.S., Russia, Canada, Denmark and Norway have agreed on Arctic search-and-rescue responsibilities (Cummins). In a world of increasingly integrated markets, we know there is much to gain from Arctic cooperation and much to lose from protracted military standoff. But we also know that dealing naively with Moscow carries a heavy cost—and that integration is a two-way street. “Russian leaders today yearn not for integration,” the Brookings Institution’s Robert Kagan concludes, “but for a return to a special Russian greatness.” In short, Russia is more interested in recreating the autarky of some bygone era than in the shared benefits of globalization. Framework for Partnership Dealing with Russia is about power. As Churchill once said of his Russian counterparts, “There is nothing they admire so much as strength, and there is nothing for which they have less respect than for weakness.” When the message is clear—or “hard and consistent,” to use Putin’s language—Russia will take a cooperative posture. When the message is unclear, Russia will take what it can get. Just consider Russia’s contrasting treatment of its neighbors: Moscow blusters about Poland and the Baltic states but keeps its hands off, largely because they are protected by the U.S.-NATO umbrella. Conversely, Russia bullies Ukraine, garrisons its troops—uninvited—in Moldova, and occupies Georgian territory. The common denominator of these unfortunate countries: They have no U.S. security guarantee. Russia should be given an opportunity to participate as a responsible partner in Arctic development. But if Russia continues to take Putin’s hard line, the U.S. and its allies are left with few other options than standing together or allowing Russia to divide and conquer. To avoid that, the allies may need to agree among themselves on lines of demarcation, transit routes and exploration rights—and then pool their resources to protect their shared interests. **This will require investment in Arctic capabilities**. For instance, the U.S. has only three polar icebreakers, two of which have exceeded their projected 30-year lifespan (O’Rourke). Russia can deploy 20 icebreakers. “We have extremely limited Arctic response capabilities,” explains Adm. Robert Papp, USCG commandant. Noting that the Coast Guard has “the lead role in ensuring Arctic maritime safety, security and stewardship,” Papp urges Congress “to start building infrastructure up there” (Joling and Papp). Washington’s defense cuts will only exacerbate these gaps, especially as Russia’s oil-aided boom enables it to retool its armed forces. Investing just 1.1 percent of its GDP on defense, Canada faces even greater challenges in defending its Arctic interests. But if the allies can combine their Arctic capabilities—each filling a niche role—and agree on a common approach to Arctic security, the framework to put those capabilities into practice is arguably already in place. Jointly operated by the U.S. and Canada, NORAD could serve as the model for an Arctic security partnership. Just as NORAD defends North American airspace, an allied maritime arrangement under the NORAD rubric could provide for security in Arctic waters. It’s worth noting that maritime surveillance was added to NORAD’s responsibilities in 2006. And in 2011, the Pentagon shifted responsibility for most Arctic operations to Northern Command (NORTHCOM), headed up by the same person who commands NORAD (Elliot). Preparing Bracing for military eventualities in the Arctic is not armchair alarmism. In fact, Gen. Gene Renuart, former NORTHCOM commander, reported in 2008 that U.S. officials were beginning to explore ways to “posture NORAD…to provide the right kind of search and rescue, military response, if need be, and certainly security for whatever activities occur in the Arctic.” **“In order to ensure a peaceful opening of the Arctic**,” adds Adm. James Winnefeld, current NORTHCOM commander, “**DOD must anticipate today the Arctic operations that will be expected of it tomorrow.”** In other words, the goal in preparing for worst-case scenarios and shoring up allied resolve in the Arctic is not to trigger a military confrontation, but to prevent one.

#### Goes nuclear

Wallace, 10

(Professor Emeritus at the University of British Columbia, March, “Ridding the Arctic of Nuclear Weapons A Task Long Overdue”, http://www.arcticsecurity.org/docs/arctic-nuclear-report-web.pdf)

The fact is, the Arctic is becoming a **zone of increased military competition**. Russian President Medvedev has announced the creation of a special military force to defend Arctic claims. Last year Russian General Vladimir Shamanov declared that Russian troops would step up training for Arctic combat, and that Russia’s submarine fleet would increase its “operational radius.” Recently, two Russian attack submarines were spotted off the U.S. east coast for the first time in 15 years. In January 2009, on the eve of Obama’s inauguration, President Bush issued a National Security Presidential Directive on Arctic Regional Policy. It affirmed as a priority the preservation of U.S. military vessel and aircraft mobility and transit throughout the Arctic, including the Northwest Passage, and foresaw greater capabilities to protect U.S. borders in the Arctic. The Bush administration’s disastrous eight years in office, particularly its decision to withdraw from the ABM treaty and deploy missile defence interceptors and a radar station in Eastern Europe, have greatly contributed to the instability we are seeing today, even though the Obama administration has scaled back the planned deployments. The Arctic has figured in this renewed interest in Cold War weapons systems, particularly the upgrading of the Thule Ballistic Missile Early Warning System radar in Northern Greenland for ballistic missile defence. The Canadian government, as well, has put forward new military capabilities to protect Canadian sovereignty claims in the Arctic, including proposed ice-capable ships, a northern military training base and a deep-water port. Earlier this year Denmark released an all-party defence position paper that suggests the country should create a dedicated Arctic military contingent that draws on army, navy and air force assets with shipbased helicopters able to drop troops anywhere. Danish fighter planes would be tasked to patrol Greenlandic airspace. Last year Norway chose to buy 48 Lockheed Martin F-35 fighter jets, partly because of their suitability for Arctic patrols. In March, that country held a major Arctic military practice involving 7,000 soldiers from 13 countries in which a fictional country called Northland seized offshore oil rigs. The manoeuvres prompted a protest from Russia – which objected again in June after Sweden held its largest northern military exercise since the end of the Second World War. About 12,000 troops, 50 aircraft and several warships were involved. Jayantha Dhanapala, President of Pugwash and former UN under-secretary for disarmament affairs, summarized the situation bluntly: “From those in the international peace and security sector, deep concerns are being expressed over the fact that two nuclear weapon states – the United States and the Russian Federation, which together own 95 per cent of the nuclear weapons in the world – converge on the Arctic and have competing claims. These claims, together with those of other allied NATO countries – Canada, Denmark, Iceland, and Norway – could, if unresolved, lead to **conflict escalating into the threat or use of nuclear weapons.**” Many will no doubt argue that this is excessively alarmist, but **no circumstance in which nuclear powers find themselves in military confrontation can be taken lightly**. The current geo-political threat level is nebulous and low – for now, according to Rob Huebert of the University of Calgary, “[the] issue is the uncertainty as Arctic states and non-Arctic states begin to recognize the geo-political/economic significance of the Arctic because of climate change.”

### Econ Adv

**Trade deficits are dragging economic recovery- risks double dip**

**Morici 2/7**

[Professor Peter Morici, of the Robert H. Smith School of Business at the University of Maryland, is a recognized expert on economic policy and international economics. Prior to joining the university, he served as director of the Office of Economics at the U.S. International Trade Commission. http://www.thestreet.com/story/11835230/1/trade-deficit-drags-on-recovery.html ETB]

On Friday, the Commerce Department is expected to report **the deficit on** international **trade** in goods and services was $46 billion in December, slightly lower than in November, owing to moderating oil prices and slower inventory build among U.S. wholesalers and retailers.¶ Overall, the deficit **is a** significant **tax on aggregate demand and jobs creation**, just as a government deficit increases demand for U.S.-made products and boosts employment. In the coming months, higher **oil prices and stronger inventory build should push up the trade deficit again and drag on economic recovery.**¶ **Persistently high trade deficits** and continuing low real estate values **are the most significant** **reason**s **why the current** economic **recovery is slowest since the Great Depression**, **and why** the **Congress** and President **face so much difficulty stabilizing federal finances without risking a second, deeper recession**. Consumer spending has expanded, though haltingly, and the annual federal deficit increased from $161 billion before the financial crisis to more than $1 trillion over the last five years, injecting enormous additional demand into the system. However, **too many consumer dollars go abroad** for Middle East oil and Chinese goods that do not return to buy U.S. exports.¶ **Businesses**, **consequently, are pessimistic about future demand for U.S.-**made **goods** and services. And bearing higher taxes, more burdensome regulations, and increased benefits costs mandated by Obamacare, **they are reluctant to hire in the** **U**nited **S**tates **and seek opportunities abroad**.¶ **Those barriers frustrated the** virtuous cycle of temporary **tax cuts and additional government spending, new hiring, and additional household spending that** the first-term Obama **stimulus** **sought** to beget.

**Plan solves- Boosts jobs, manufacturing, and export growth**

**Baker et al 8**

(*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., Economic, Employment and Environmental Benefits of Renewed U.S. Investment in Nuclear Energy, Produced by Oxford Economics for the American Council on Global Nuclear Competitiveness, Above Authors are the Council Members, http://www.nuclearcompetitiveness.org/images/Oxford\_State\_Benefits\_2008.pdf)

The nuclear energy investment program has the potential for generating substantial ‘spillover’ or ‘catalytic’ benefits that would be less likely to accrue from further investment in coal-fired generation. These spillover effects have not been quantified in this study, but are likely to be substantial, and are worthy of further research. They include:

* Benefits for manufacturing technology, advancing the technological frontier, to the benefit of other manufacturing firms based in the US. The proposed nuclear generation build out will involve bringing to market the fruits of R&D that have as yet not been exploited. The insights and advances made in the development phase of R&D projects can be large, and are often transferable, at least in part, into other industrial sectors. Those countries that undertake a lot of R&D tend to be the same countries that have high levels of average productivity, as the lessons from that R&D diffuse around the economy as a whole.
* Benefits for the composition of employment, creating and retaining a cluster of high-tech manufacturing jobs in the US. While new skilled positions would have to be created to meet the requirements of the nuclear build, it is estimated by other studies1 that any new equipment required for fossil fuel generation plant could be met by existing excess capacity in the manufacturing sector. The skill requirements associated with the nuclear build would increase steadily over time, allowing a gradual accumulation of these skills within the US workforce, rather than a requirement for importing skilled labor. The creation of these new skilled jobs would provide a significant boost to the stock of human capital in the US, and therefore to the average levels of productivity that the US workforce could achieve.
* Benefits for exports, bringing the US nuclear industry to the forefront among its peers in the global economy, and creating a potential source of export earnings well into the future as US expertise is distributed around the world.

**Studies prove SMRs spur massive job growth- the alternative is massive increase in the trade deficit**

**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.

**Multiplier effect magnifies the short-term internal link**

**Solan 2010**

 (David Solan, Director, Energy Policy Institute, Associate Director, Center for Advanced Energy Studies, Assistant Professor of Public Policy and Administration at Boise State University, June 2010, “ECONOMIC AND EMPLOYMENT IMPACTS OF SMALL MODULAR NUCLEAR REACTORS,” Energy Policy Institute, <http://www.nuclearcompetitiveness.org/images/EPI_SMR_ReportJune2010.pdf>)

In terms of the economic impacts of the SMR industry, the direct effects stem from the actual change in final demand for SMR units. An increase in SMR demand, for example, will create additional employment and salaries within the SMR industry. The indirect effects stem from the purchases of goods and services by the SMR industry from suppliers in other domestic industries. In effect, the SMR industry,as its purchases from other firms, **ripple through the economy** in a chain- like manner. The induced effects stem from the increase in wage and salary earnings and other household income that ripples though the economy as direct and indirect dollars are spent and re-spent in the national economy. The biggest driver of these induced effects is employee spending from wage and salary payroll and earnings.¶ The presence of indirect and induced economic effects means that an initial increase in demand for a given industry’s output will get multiplied in the economy.¶ The size of the multiplier effects is of primary concern in I-O analysis and is an important component in determining the overall economic impacts of industry changes. In essence, multipliers determine how the direct change in final demand of a single¶ industry ripples throughout all the other industries in an economy. Two basic types of multipliers are recognized in standard I-O analysis. Type I multipliers measure the direct changes and the indirect Type II multipliers, also known as Social Accounting Matrix (SAM) multipliers, are larger in magnitude and more broad-based by virtue of the fact that they include the direct, indirect, and induced effects. They assume wages, salaries, and other income circulate through the economy along with backward linkages of business purchases. Type II multipliers measure the direct, indirect, and induced impacts from a change in final demands as measured by sales (output). Because the sum of the direct, indirect, and induced measures the total impact of an industry to an economy, this report will employ Type II multipliers. Once the Type II multipliers for the SMR industry are calculated, they can be used to estimate the changes in the overall economic activity of the U.S. economy stemming from different levels of activity in the SMR industry.

**Plan accesses a huge export market**

**Rosner and Goldberg 11**

Robert Rosner, Stephen Goldberg, Energy Policy Institute at Chicago, The Harris School of Public Policy Studies, November 2011, SMALL MODULAR REACTORS –KEY TO FUTURE NUCLEAR POWER GENERATION IN THE U.S., <https://epic.sites.uchicago.edu/sites/epic.uchicago.edu/files/uploads/EPICSMRWhitePaperFinalcopy.pdf>

Previous **studies have documented the potential for a significant export market for U.S. SMRs, mainly in lesser developed countries that do not have the demand or infrastructure to accommodate GW-scale LWRs**. Clearly, the economics of SMR deployment depends not only on the cost of SMR modules, but also on the substantial upgrades in all facets of infrastructure requirements, particularly in the safety and security areas, that would have to be made, and as exemplified by the ongoing efforts in this direction by the United Arab Emirates (and, in particular, by Abu Dhabi). This is a substantial undertaking for these less developed countries. Thus, such applications may be an attractive market opportunity for FOAK SMR plants, even if the cost of such plants may not have yet achieved all of the learning benefits.

**The Department of Commerce has launched the Civil Nuclear Trade Initiative, which seeks to identify the key trade policy challenges and the most significant commercial opportunities.** The Initiative encompasses all aspects of the U.S. nuclear industry, and, as part of this effort, **the Department identified 27 countries as “markets of interest” for new nuclear expansion**. A recent Commerce Department report identified that “**SMRs can be a solution for certain markets that have smaller and less robust electricity grids and limited investment capacity**.” Studies performed by Argonne National Laboratory suggest that **SMRs would appear to be a feasible power option for countries** that have grid capacity of 2,000-3,000 MW. **Exports of SMR technology** also **could play an important role in furthering non-proliferation policy objectives.** **The design of SMR nuclear fuel management systems**, such as encapsulation of the fuel, **may have non-proliferation benefits** that merit further assessment. Also, **the development of an SMR export industry would be step toward a U.S.-centric, bundled reliable fuel services**.

**Now key- first to commercialize captures the market**

**Cunningham ‘12**

[Nick Cunningham is a Policy Analyst for Energy and Climate at the American Security Project. “Small Modular Reactors: A Possible Path Forward for Nuclear Power.” October 2012 ETB]

Third, **nuclear power serves as a hedge against the price volatility of fossil fuels**. While dramatic declines in ¶ wellhead prices for natural gas have led to it capturing an increasing share of the market in recent years, **natural gas prices have historically been extremely volatile**. Additionally, with the prospect of a price being levied on ¶ carbon-based fuels in the coming years, **nuclear power can ensure cheap and reliable power for decade**s. ¶ Finally, **the rapid increase in demand for electricity** around the world over the next several decades **presents the U.S. with a huge opportunity to create jobs through exporting nuclear technology**. **Demand for nuclear power is expected to increase by 70% over the next 20 years**, **and America is well-positioned to capture much of that** ¶ **new business.**

**US key to global growth**

**Caploe ‘9**

David Caploe (the CEO of the Singapore-incorporated American Centre for Applied Liberal Arts and Humanities in Asia) April 2009 “Focus Still on America to Lead Global Recovery” Online

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

**Global economic crisis causes war and great power transitions**

**Royal 2010** (Jedediah Royal, Director of Cooperative Threat Reduction at the U.S. Department of Defense, 2010, “Economic Integration, Economic Signaling and the Problem of Economic Crises,” in Economics of War and Peace: Economic, Legal and Political Perspectives, ed. Goldsmith and Brauer, p. 213-214)

Less intuitive is how periods of economic decline may increase the likelihood of external conflict. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson’s (1996) work on leadership cycle theory, finding that rhythms in the global economy are associated with the rise and fall of pre-eminent power and the often bloody transition from one pre-eminent leader to the next. As such, exogenous shocks such as economic crises could usher in a redistribution of relative power (see also Gilpin, 10981) that leads to uncertainty about power balances, increasing the risk of miscalculation (Fearon, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner, 1999). Seperately, Polllins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium, and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland’s (1996,2000) theory of trade expectations suggests that ‘future expectation of trade’ is a significant variable in understanding economic conditions and security behavior of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However, if the expectation of future trade decline, particularly for difficult to replace items such as energy resources, the likelihood for conflict increases , as states will be inclined to use force to gain access to those resources. Crises could potentially be the trigger for decreased trade expectations either on its own or because it triggers protectionist moves by interdependent states. Third, others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict, particularly during periods of economic downturn. They write, The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other. (Blomberg & Hess, 2002, p.89). Economic decline has also been linked with an increase in the likelihood of terrorism (Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government. ‘Diversionary theory’ suggests that, when facing unpopularity arising from economic decline, sitting governments have increased incentives to create a ‘rally round the flag’ effect. Wang (1996), DeRouen (1995), and Blomberg, Hess and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997) Miller (1999) and Kisanganie and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that periods of weak economic performance in the United States, and thus weak presidential popularity, are statistically linked to an increase in the use of force.

**Growth massively reduces conflict- studies prove**

**Gartzke and Rohner 10**

(Erik Gartzke Prof PoliSci @ UC San Diego, Dominic Rohner University of Zurich, “To Conquer or Compel: War, Peace, and Economic Development, “, Institute for Empirical Research in Economics University of Zurich Working Paper No. 511, 9-24, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=1684000)

**To assess the relationship between development and militarized con¶ ict, we examine data covering¶ the post-World War II period.** **We also extend the analysis over the period 1816-2000 using a¶ slightly cruder indicator of economic development**. As a baseline, we begin with a statistical model¶ of con¶ ict developed by Oneal & Russett (1999), thus limiting the need for detailed description of¶ the variables and allowing for a broader comparison of our results. There is potential bias in analysis¶ of militarized con¶ ict, given the large disparity between events (\1's") and non-events (\0's"). For¶ this reason, we estimate coe cients using rare events logit (King & Zeng 2001a, 2001b) within the¶ Stata software package. Independent variables are lagged by one year to address endogeneity. We¶ use the Beck, Katz and Tucker (1998) method of temporal splines to control duration dependence.¶ [CONTINUES SEVERAL PAGES LATER]¶ We are left with the possibility that economic development has two contrasting e ects on con-¶ ict; an increase in the tendency to ght for in¶ uence (where needed) and a decrease in the mo-¶ tivation to capture real estate. **A stronger economy brings with it the potential to exercise force¶ at greater distances from the homeland**, **broadening the number of possible targets for coercion**.¶ Yet, the general tendency is for developed countries to ght less often than they might. Capacity¶ and inclination are operating in opposite directions, particularly with regard to territorial disputes.¶ Contiguous neighbors are the most obvious target for revisionist warfare. Yet, at least one ap-¶ peal of conquest is removed if the bene ts of occupation fail to meet costs. A **secular decline in¶ commodity prices and an increase in the value of skilled labor ensure that the fruits of conquest¶ are more equivocal for developed states**. Indeed, the recent precipitous rise in commodity prices¶ may be cause for some concern. Alternately, it could be that **developed countries are reluctant to¶ engage in conquest because aggression disrupts markets at home**. Further research is required to¶ determine whether development acts more to inhibit aggression from or toward developed states.¶ **World peace is a long way o , but you may be able to see some of it from the results reported¶ here**. Previous reports stressing the essential irrelevance of economic development for interstate¶ peace certainly merit some additional skepticism. Development, while a mixed bag, seems on the¶ whole to o er a means for reducing the intensity, and in some cases the frequency, of interstate¶ disputes. Territory has historically formed the basis for the bloodiest and most intractable wars.¶ **We show that the intensity of interstate violence among developed countries is much lower than¶ among developing countries**. **It is more than speculation to conclude that warfare in modernity¶ involves smaller and/or less protracted contests.** If **economic development broadens to include more¶ of the world's nations, one can hope that peace, if partial and incomplete, will eventually follow.**

**Those conflicts go nuclear**

**Burrows and Harris ‘09**

(Mathew J. Burrows is a counselor in the National Intelligence Council (NIC), the principal drafter of Global Trends 2025: A Transformed World, Jennifer Harris is a member of the NIC’s Long Range Analysis Unit, “Revisiting the Future: Geopolitical Effects of the Financial Crisis”, The Washington Quarterly, April,http://www.ciaonet.org/journals/twq/v32i2/f\_0016178\_13952.pdf)

Increased Potential for Global Conflict Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that **the Great Depression** is not likely to be repeated, **the lessons to bedrawn from that period include the harmful effects on fledgling democracies andmultiethnic societies (think Central Europe in 1920s and 1930s) and onthe sustainability ofmultilateral institutions (think League of Nationsin thesame period).** There is no reason to think that this would not be true in the twenty-first as much as in the twentieth century. For that reason, the ways in which **the potential for greater conflict could grow** would seem to be even more apt **in a constantly volatile economic environment** as they would be if change would be steadier. In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. **Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced**. For those terrorist groups that remain active in 2025, however, the **diffusion oftechnologies and scientific knowledge will place some of the world’s mostdangerous capabilities within their reach.** Terrorist groups in 2025 will likely be a combination of descendants of long established groups inheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attack and **newly emergentcollections of the angry and disenfranchised that become self-radicalized,particularly in the absence of economic outlets that would become narrowerin an economic downturn. The most dangerous casualty of any economically-induced drawdown of U.S. military presence would almost certainly be the Middle East.** Although Iran’s acquisition of nuclear weapons is not inevitable, **worries about a nuclear-armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship**that existed between the great powers for most of the Cold War **would emerge**naturally in the Middle East with a nuclear Iran. **Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation** and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual-capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack**. Thelack of strategic depth in neighboring states like Israel, short warning and missileflight times, and uncertainty of Iranian intentions may place more focus onpreemption rather than defense, potentially leading to escalating crises. Types of conflict that the world continuesto experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo-mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if governmentleaders deem assured access to energy resources,**for example, **to be essential for maintaining domestic stability and the survival oftheir regime. Even actions short of war, however, will have important geopoliticalimplications. Maritime security concerns are providing a rationale for navalbuildups and modernization efforts, such as China’s and India’s** development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. **Buildup ofregional naval capabilities could lead to increased tensions, rivalries, andcounterbalancing moves**, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. **With water also becoming scarcer inAsia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult** both within and between states **in amoredog-eat-dog world.**What Kind of World will 2025 Be? Perhaps more than lessons, history loves patterns. Despite widespread changes in the world today, there is little to suggest that the future will not resemble the past in several respects. The report asserts that, under most scenarios, **the trendtoward greater diffusion of authority and power that has been ongoing for acouple of decades is likely to accelerate because of the emergence of new globalplayers, the worsening institutional deficit, potential growth in regional blocs,**and enhanced strength of non-state actors and networks. The multiplicity of actors on the international scene could either strengthen the international system, by filling gaps left by aging post-World War II institutions, or could further fragment it and incapacitate international cooperation. The diversity in both type and kind of actor raises the likelihood of fragmentation occurring over the next two decades, particularly given the wide array of transnational challenges facing the international community. Because of their growing geopolitical and economic clout, the rising powers will enjoy a high degree of freedom to customize their political and economic policies rather than fully adopting Western norms. They are also likely to cherish their policy freedom to maneuver, allowing others to carry the primary burden for dealing with terrorism, climate change, proliferation, energy security, and other system maintenance issues. Existing multilateral institutions, designed for a different geopolitical order, appear too rigid and cumbersome to undertake new missions, accommodate changing memberships, and augment their resources. Nongovernmental organizations and philanthropic foundations, concentrating on specific issues, increasingly will populate the landscape but are unlikely to affect change in the absence of concerted efforts by multilateral institutions or governments. Efforts at greater inclusiveness, to reflect the emergence of the newer powers, may make it harder for international organizations to tackle transnational challenges. Respect for the dissenting views of member nations will continue to shape the agenda of organizations and limit the kinds of solutions that can be attempted. **An ongoing financial crisis and prolonged recession would tilt the scales even further in the direction of a fragmented and dysfunctional international system with a heightened risk of conflict. The report concluded that the rising BRIC powers (Brazil, Russia, India, and China) seem averse to challenging the international system, as Germany and Japan did in the nineteenth and twentiethcenturies, but this of course could change if their widespread hopes for greater prosperity become frustrated and the current benefits they derive from a globalizing world turn negative.**

### Solvency

**DoD acquisition of SMR’s ensures rapid military adoption and commercialization, and prevents unfavorable tech lock-in**

**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)

DOD as First Mover¶ 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¶ 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. **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**.

**Alternative financing cuts costs and supercharges commercialization**

**Fitzpatrick 11**

Ryan Fitzpatrick, Senior Policy Advisor for Clean Energy at Third Way, Josh Freed, Vice President for Clean Energy at Third Way, and Mieke Eoyan, Director for National Security at Third Way, June 2011, Fighting for Innovation: How DoD Can Advance CleanEnergy Technology... And Why It Has To, content.thirdway.org/publications/414/Third\_Way\_Idea\_Brief\_-\_Fighting\_for\_Innovation.pdf

The DoD has over $400 billion in annual purchasing power, **which means the Pentagon could provide a sizeable market for new technologies**. **This can increase a technology’s scale of production, bringing down costs, and making the product more likely to successfully reach commercial markets**. **Unfortunately**, many potentially significant clean energy **innovations never get to the marketplace, due to a lack of capital during** the development and **demonstration stages. As a result, technologies that could help the military** meet its clean energy security and cost goals **are being abandoned or co-opted by competetors like China** before they are commercially viable here in the U.S. **By focusing its purchasing power on innovative products that will** help **meet its energy goals, DoD can provide** more **secure** and **cost-effective energy to the military—producing tremendous long-term savings**, while also **bringing** potentially **revolutionary technologies to the public**. Currently, many of these **technologies are passed over during** the **procurement** process **because of** higher **upfront costs—even if these technologies can reduce life-cycle costs** to DoD. The Department has only recently begun to consider life-cycle costs and the “fullyburdened cost of fuel” (FBCF) when making acquisition decisions. However, initial reports from within DoD suggest that the methodology for determining the actual FBCF needs to be refined and made more consistent before it can be successfully used in the acquisition process.32 The Department should fast-track this process to better maximize taxpayer dollars. Congressional appropriators— and the Congressional Budget Office—should also recognize the **savings that can be achieved by procuring advanced technologies to promote DoD’s energy goals**, even if these procurements come with higher upfront costs. **Even if the Pentagon makes procurement of emerging clean energy technologies a higher priority, it still faces real roadblocks in developing relationships with the companies that make them. Many clean energy innovations are developed by small businesses or companies that have no previous experience working with military procurement officers. Conversely, many procurement officers do not know the clean energy sector and are not incentivized to develop relationships with emerging clean energy companies**. Given the stakes in developing domestic technologies that would help reduce costs and improve mission success, the Pentagon should develop a program to encourage a better flow of information between procurement officers and clean energy companies—especially small businesses. Leverage Savings From Efficiency and Alternative Financing to Pay for Innovation. **In an age of government-wide austerity and tight** Pentagon **budgets**, current congressional **appropriations are simply not sufficient** to fund clean energy innovation. **Until Congress decides to direct additional resources** for this purpose, the **Defense** Department **must leverage** the money and other **tools it already has** to help develop clean energy. This can take two forms: repurposing money that was saved through energy efficiency programs for innovation and using alternative methods of financing to reduce the cost to the Pentagon of deploying clean energy. For several decades **the military has made** modest **use alternative financing** **mechanisms to fund** clean **energy** and efficiency **projects when appropriated funds were insufficient**. In a 2010 report, GAO found that while only 18% of renewable energy projects on DoD lands used alternative financing, these projects account for 86% of all renewable energy produced on the Department’s property.33 This indicates that **alternative financing can be particularly helpful to DoD in terms of bringing larger and more expensive projects to fruition**. One advanced financing tool available to DoD is **the energy savings performance contract** (ESPC). These agreements **allow DoD to contract a private firm to make upgrades to a building or other facility that result in energy savings, reducing overall energy costs without appropriated funds**. **The firm finances the cost, maintenance and operation of these upgrades and recovers a profit over the life of the contract**. While mobile applications consume 75% of the Department’s energy,34 DoD is only authorized to enter an ESPC for energy improvements done at stationary sites. As such, Congress should allow DoD to conduct pilot programs in which ESPCs are used to enhance mobile components like aircraft and vehicle engines. This could accelerate the needed replacement or updating of aging equipment and a significant reduction of energy with no upfront cost. To maximize the potential benefits of ESPCs, DoD should work with the Department of Energy to develop additional training and best practices to ensure that terms are carefully negotiated and provide benefits for the federal government throughout the term of the contract.35 This effort could possibly be achieved through the existing memorandum of understanding between these two departments.36 The Pentagon should also consider using any long-term savings realized by these contracts for other energy purposes, including the promotion of innovative technologies to further reduce demand or increase general energy security. In addition to ESPCs, **the Pentagon** also **can enter into** extended agreements with utilities to use DoD land to generate electricity, or for the **long-term purchase of energy**. **These** **innovative financing mechanisms**, known respectively as enhanced use leases (EULs) and power purchase agreements (PPAs), **provide a valuable degree of certainty to third party generators**. In exchange, the **Department can leverage its existing resources**—either its land or its purchasing power—**to negotiate lower electricity rates** and dedicated sources of locallyproduced power with its utility partners. **DoD has unique authority among federal agencies to enter extended 30-year PPAs**, **but only for geothermal energy projects and only with direct approval from the Secretary of Defense**. Again, limiting incentives for clean energy generation to just geothermal power inhibits the tremendous potential of other clean energy sources to help meet DoD’s energy goals. **Congress should consider opening this incentive up to other forms of clean energy generation**, including the production of advanced fuels. Also, given procurement officials’ lack of familiarity with these extended agreements and the cumbersome nature of such a high-level approval process, the unique authority to enter into extended 30-year PPAs is very rarely used.37 DoD should provide officials with additional policy guidance for using extended PPAs and Congress should simplify the process by allowing the secretary of each service to approve these contracts. Congress should also investigate options for encouraging regulated utility markets to permit PPA use by DoD. Finally, when entering these agreements, the Department should make every effort to promote the use of innovative and fledgling technologies in the terms of its EULs and PPAs. CON C L U S ION **The Defense Department is in a unique position to foster and deploy innovation in clean energy technologies**. This has two enormous benefits for our military: it will make our troops and our facilities more secure and it will reduce the amount of money the Pentagon spends on energy, freeing it up for other mission critical needs. If the right steps are taken by Congress and the Pentagon, the military will be able to put its resources to work developing technologies that will lead to a stronger fighting force, a safer nation, and a critical emerging sector of the American economy. **The Defense Department has helped give birth to technologies and new economic sectors dozens of times before**. For its own sake and the sake of the economy, **it should make clean energy innovation its newest priority**.

**DoD key- avoids regulations**

Glen **Butler**, Lt. Col., 20**11**, Not Green Enough, [www.mca-marines.org/gazette/not-green-enough](http://www.mca-marines.org/gazette/not-green-enough)

**SMRs have relatively low plant cost**, can replace aging fossil plants, and do not emit greenhouse gasses. Some are as small as a “hot tub” and can be stored underground, dramatically increasing safety and security from terrorist threats.25 Encouragingly, in fiscal year 2010 (FY10) the **DoE allocated** $0 to **the U.S. SMR Program**; in FY11, they’ve requested $38.9 million. This **funding is to support** two main activities—**public/private partnerships to advance** SMR **designs and research** **and** development and **demonstrations**. According to the DoE’s website, one of the planned program accomplishments for FY11 is to “collaborate with the Department of Defense (DoD) . . . to assess the feasibility of SMR designs for energy resources at DoD installations.”26 The Marine Corps should vigorously seek the opportunity to be a DoD entity providing one platform for this feasibility assessment.27 Fourth, **SMR** technology **offers** the Marine Corps **a**nother **unique means to lead from the front**—not just of the other Services but also of **the Nation, and** even **the world**.28 **This** potential Pete Ellis **moment should be seized**. There are simple steps we could take, and others stand ready to lead if we are not.30 But **the temptation to “wait and see” and “let the others do it; then we’ll adopt it” mentality is not** always **best**. **Energy security demands boldness**, not timidity. To be fair, nuclear technology comes with challenges, of course, and with questions that have been kicked around for decades. An April 1990 Popular Science article asked, “Next Generation Nuclear Reactors—Dare we build them?” and included some of the same verbiage heard in similar discussions today.31 Compliance with National Environment Policy Act requirements necessitates lengthy and detailed preaction analyses, critical community support must be earned, and disposal challenges remain. Still, none of these hurdles are insurmountable. Yet despite the advances in safety, security, and efficiency in recent years, nuclear in the energy equation remains the new “n-word” for most military circles. And despite the fact that the FY10 National Defense Authorization Act called on the DoD to “conduct a study [of] the feasibility of nuclear plants on military installations,” the Office of the Secretary of Defense has yet to fund the study. Fifth**, the** **cumbersome, bureaucratic certification** **process** **of** **the** Nuclear Regulatory Commission (**NRC**), often **enough to scare away potential entrepreneurs and investors, is not** **necessarily** **a roadblock to success**. The NRC is “responsible for licensing and regulating the operation of commercial nuclear power plants in the United States.” **Military installations offer unique platforms that** could likely **bypass** an extended **certification** process. **With established expertise and a long safety record in nuclear reactor certification**, operations, training, and maintenance, the Naval Nuclear Propulsion Program comprises the civilian and military personnel who: . . . design, build, operate, maintain, and manage the nuclear-powered ships and the many facilities that support the U.S. nuclear-powered naval fleet.”34 **Bypassing the NRC and initiating SMR experimentation** under ADM Hyman Rickover’s legacy umbrella of naval reactors **could shorten the process to a reasonable level for** Marine and naval **installations**.35

**They have the personnel and expertise**

**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)

Section 332 of the FY2010 National Defense Authorization Act (NDAA), “Extension and Expansion of Reporting Requirements Regarding Department of Defense Energy Efficiency Programs,” requires the Secretary of Defense to evaluate the cost and feasibility of a policy that would require new power generation projects established on installations to be able to provide power for military operations in the event of a commercial grid outage.28 A potential solution to meet this national security requirement, as well as the critical needs of nearby towns, is for DoD to evaluate SMRs as a possible source for safe and secure electricity. **Military facilities depend on reliable sources of energy to operate, train, and support national security missions. The power demand for most military facilities is not very high, and could easily be met by a SMR.** Table 1 provides the itemized description of the annual energy requirements in megawatt of electricity (MWe) required for the three hundred seventy four DoD installations.29 DoD History with SMRs **The concept of small reactors for electrical power generation is not new**. In fact, **the DoD built and operated small reactors for applications on land and at sea**. **The U.S. Army operated eight nuclear power plants from 1954 to 1977. Six out of the eight reactors built by the Army produced operationally useful power for an extended period, including the first nuclear reactor to be connected and provide electricity to the commercial grid**. 30 The Army program that built and operated compact nuclear reactors was ended after 1966, not because of any safety issues, but strictly as a result of funding cuts in military long range research and development programs. In essence, it was determined that the program costs could only be justified if there was a unique DoD specific requirement. At the time there were none.31 Although it has been many years since these Army reactors were operational, the independent source of energy they provided at the time is exactly what is needed again to serve as a secure source of energy today. Many of the nuclear power plant designs used by the Army were based on United States Naval reactors. Although the Army stopped developing SMRs, **the Navy as well as the private sector has continued to research, develop, and implement improved designs** to improve the safety and efficiency of these alternative energy sources. The U.S. Navy nuclear program developed twenty seven different power plant systems and almost all of them have been based on a light water reactor design.32 This design focus can be attributed to the inherent safety and the ability of this design to handle the pitch and roll climate expected on a ship at sea. **To date, the U. S Navy operated five hundred twenty six reactor cores in two hundred nineteen nuclear powered ships, accumulated the equivalent of over six thousand two hundred reactor years of operation and safely steamed one hundred forty nine million miles**. **The U.S. Navy has never experienced a reactor accident**.33 All of the modern Navy reactors are design to use fuel that is enriched to ninety three percent Uranium 235 (U235) versus the approximate three percent U235 used in commercial light water reactors. The use of highly enriched U235 in Navy vessels has two primary benefits, long core lives and small reactor cores.34 The power generation capability for naval reactors ranges from two hundred MWe (megawatts of electricity) for submarines to five hundred MWe for an aircraft carrier. A Naval reactor can expect to operate for at least ten years before refueling and the core has a fifty year operational life for a carrier or thirty to forty years for a submarine.35 As an example, the world’s first nuclear carrier, the USS Enterprise, which is still operating, celebrated fifty years of operations in 2011.36 The Navy nuclear program has set a precedent for safely harnessing the energy associated with the nuclear fission reaction. In addition, **the Navy collaborates with the private sector to build their reactors and then uses government trained personnel to serve as operators**. **Implementing the use of SMRs as a secure source of energy for our critical military facilities will leverage this knowledge and experience**.

**SMRs are cost-effective, safe, can be quickly deployed, and solve waste**

**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 design**s 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.

#### SMRs can be deployed quickly

**Kessides and Kuznetsov 12**

Ioannis N. Kessides and Vladimir Kuznetsov 12, Ioannis is a researcher for the Development Research Group at the World Bank, Vladimir is a consultant for the World Bank, “Small Modular Reactors for Enhancing Energy Security in Developing Countries”, August 14, Sustainability 2012, 4(8), 1806-1832

**SMRs** offer a number of advantages that can potentially offset the overnight cost penalty that they suffer relative to large reactors. Indeed, several characteristics of their proposed designs **can** serve to **overcome** some of **the key barriers that have inhibited the growth of nuclear power**. **These characteristics include** [23,24]: \* • **Reduced construction duration. The smaller size, lower power, and simpler design of SMRs allow for greater modularization, standardization, and factory fabrication of components and modules**. **Use of factory-fabricated modules simplifies the on-site construction activities and greatly reduces the amount of field work required to assemble the components into an operational plant**. **As a result, the construction duration of SMRs could be significantly shorter compared to large reactors leading to important economies in the cost of financing**. \* • **Investment scalability and flexibility**. In contrast to conventional large-scale nuclear plants, **due to their smaller size and shorter construction lead-times SMRs could be added one at a time in a cluster of modules or in dispersed and remote locations**. Thus **capacity expansion can be more flexible and adaptive to changing market conditions**. **The sizing, temporal and spatial flexibility of SMR deployment have important implications for the perceived investment risks** (and hence the cost of capital) **and financial costs** of new nuclear build. Today’s gigawatt-plus reactors require substantial up-front investment—in excess of US$ 4 billion. Given the size of the up-front capital requirements (compared to the total capitalization of most utilities) and length of their construction time, new large-scale nuclear plants could be viewed as “bet the farm” endeavors for most utilities making these investments. SMR total capital investment costs, on the other hand, are an order of magnitude lower—in the hundreds of millions of dollars range as opposed to the billions of dollars range for larger reactors. **These smaller investments can be more easily financed, especially in small countries with limited financial resources**. **SMR deployment with just-in-time incremental capacity additions would** normally **lead to a more favorable expenditure/cash flow profile** relative to a single large reactor with the same aggregate capacity—even if we assume that the total time required to emplace the two alternative infrastructures is the same. This is because when several SMRs are built and deployed sequentially, **the early reactors will begin operating and generating revenue while the remaining ones are being constructed**. In the case of a large reactor comprising one large block of capacity addition, no revenues are generated until all of the investment expenditures are made. Thus the staggered build of SMRs could minimize the negative cash flow of deployment when compared to emplacing a single large reactor of equivalent power [25]. \* • **Better power plant capacity and grid matching**. In countries with small and weak grids, the addition of a large power plant (1000 MW(e) or more) can lead to grid stability problems—the general “rule of thumb” is that the unit size of a power plant should not exceed 10 percent of the overall electricity system capacity [11]. **The incremental capacity expansion associated with SMR deployment**, on the other hand, **could help meet increasing power demand while avoiding grid instability problems**. \* • **Factory fabrication and mass production economies**. **SMR designs are engineered to be pre-fabricated and mass-produced in factories, rather than built on-site**. **Factory fabrication of components and modules for shipment and installation in the field with almost Lego-style assembly is generally cheaper than on-site fabrication**. Relative to today’s gigawatt-plus reactors, SMRs benefit more from factory fabrication economies because they can have a greater proportion of factory made components. In fact, some **SMRs could be manufactured and fully assembled at the factory, and then transported to the deployment site**. Moreover, **SMRs can benefit from the “economies of multiples” that accrue to mass production of components in a factory with supply-chain management**. \* • **Learning effects and co-siting economies**. **Building reactors in a series can lead to significant per-unit cost reductions**. **This is because the fabrication of many SMR modules on plant assembly lines facilitates the optimization of manufacturing and assembly processes**. **Lessons learned from the construction of each module can be passed along in the form of productivity gains or other cost savings** (e.g., lower labor requirements, shorter and more efficiently organized assembly lines) **in successive units** (Figure 6). Moreover, **additional learning effects can be realized from the construction of successive units on the same site**. Thus **multi-module clustering could lead to learning curve acceleration**. Since more SMRs are deployed for the same amount of aggregate power as a large reactor, these learning effects can potentially play a much more important role for SMRs than for large reactors [26]. Also, **sites incorporating multiple modules may require smaller operator and security staffing**. \* • **Design simplification**. Many SMRs offer significant design simplifications relative to large-scale reactors utilizing the same technology. This is accomplished thorough the adoption of certain design features that are specific to smaller reactors. For example, **fewer and simpler safety features are needed in SMRs** with integral design of the primary circuit (i.e., with an in vessel location of steam generators and no large diameter piping) that effectively eliminates large break LOCA. Clearly one of the main factors negatively affecting the competitiveness of small reactors is economies of scale—SMRs can have substantially higher specific capital costs as compared to large-scale reactors. However, SMRs offer advantages that can potentially offset this size penalty. As it was noted above, **SMRs may enjoy significant economic benefits due to shorter construction duration, accelerated learning effects and co-siting economies, temporal and sizing flexibility of deployment, and design simplification**. When these factors are properly taken into account, then the fact that smaller reactors have higher specific capital costs due to economies of scale does not necessarily imply that the effective (per unit) capital costs (or the levelized unit electricity cost) for a combination of such reactors will be higher in comparison to a single large nuclear plant of equivalent capacity [22,25]. In a recent study, Mycoff et al. [22] provide a comparative assessment of the capital costs per unit of installed capacity of an SMR-based power station comprising of four 300 MW(e) units that are built sequentially and a single large reactor of 1200 MW(e). They employ a generic mode to quantify the impacts of: (1) economies of scale; (2) multiple units; (3) learning effects; (4) construction schedule; (5) unit timing; and (6) plant design (Figure 7). To estimate the impact of economies of scale, Mycoff et al. [22] assume a scaling factor n = 0.6 and that the two plants are comparable in design and characteristics—i.e., that the single large reactor is scaled down in its entirety to ¼ of its size. According to the standard scaling function, the hypothetical overnight cost (per unit of installed capacity) of the SMR-based power station will be 74 percent higher compared to a single large-scale reactor. Based on various studies in the literature, the authors posit that the combined impact of multiple units and learning effects is a 22 percent reduction in specific capital costs for the SMR-based station. To quantify the impact of construction schedule, the authors assume that the construction times of the large reactor and the SMR units are five and three years respectively. The shorter construction duration results in a 5 percent savings for the SMRs. Temporal flexibility (four sequentially deployed SMRs with the first going into operation at the same time as the large reactor and the rest every 9 months thereafter) and design simplification led to 5 and 15 percent reductions in specific capital costs respectively for the SMRs. When all these factors are combined, the SMR-based station suffers a specific capital cost disadvantage of only 4 percent as compared to the single large reactor of the same capacity. Thus, **the economics of SMRs challenges the widely held belief that nuclear reactors are characterized by significant economies of scale** [19].

#### Licensing’s no big deal and DoD solves

William **Madia 12**, Stanford Energy Journal, serves as Chairman of the Board of Overseers and Vice President for the SLAC National Accelerator Laboratory at Stanford University. Previously, he was the Laboratory Director at the Oak Ridge National Laboratory from 2000-2004 and the Pacific Northwest National Laboratory from 1994-1999., “small modular reactors: a potential game-changing technology”, http://energyclub.stanford.edu/index.php/Journal/Small\_Modular\_Reactors\_by\_William\_Madia, Spring 2012)

No one has yet obtained a design certification from the Nuclear Regulatory Commission (NRC) for an SMR, so we must consider licensing to be one of the largest unknowns facing these new designs. Nevertheless, **since the most developed of the SMRs are mostly based on proven and licensed components and are configured at power levels that are passively safe, we should not expect many new significant licensing issues to be raised for this class of reactor**. Still, the NRC will need to address issues uniquely associated with SMRs, such as the number of reactor modules any one reactor operator can safely operate and the size of the emergency planning zone for SMRs.¶ To determine if SMRs hold the potential for changing the game in carbon-free power generation, it is imperative that we test the design, engineering, licensing, and economic assumptions with some sort of public-private development and demonstration program. Instead of having government simply invest in research and development to “buy down” the risks associated with SMRs, I propose a more novel approach. **Since the federal government is a major power consumer, it should commit to being the “first mover” of SMRs. This means purchasing the first few hundred MWs of SMR generation capacity and dedicating it to federal use**. **The advantages of this approach are straightforward**. **The government would both reduce licensing and economic risks to the point where utilities might invest in subsequent units, thus jumpstarting the SMR industry**. It would then also be the recipient of additional carbon-free energy generation capacity. This seems like a very sensible role for government to play without getting into the heavy politics of nuclear waste, corporate welfare, or carbon taxes.

#### US nuclear is expanding, including SMRs

Silverstein 2/15

[Ken Silverstein is editor-in-chief for Energy Central's EnergyBiz Insider and a contributor to Forbes, http://thebreakthrough.org/index.php/programs/energy-and-climate/obama-aims-for-nuclear-breakthroughs/ ETB]

Two years ago, some thought that the nuclear energy had been leveled. But the industry today is picking up steam by getting construction licenses to build four new units and by getting government funding to develop smaller nuclear reactors that are less expensive and which may be less problematic when it comes to winning regulatory approval.

#### Global nuclear expansion now

**Tirone 12** Jonathan, AP, “Nuclear Power Production Set to Grow Even After Japan Phase-Out (Vienna)”, 9/19, <http://www.northjersey.com/news/international/170334006_Nuclear_Power_Production_Set_to_Grow_Even_After_Japan_Phase-Out__Vienna_.html?page=all>

**Nuclear power is set to grow over the next four decades even after Japan shuts down its reactor fleet**, the International Atomic Energy Agency says. **Global** installed **capacity is set to rise to at least 469 gigawatts of energy by 2050 from 370 GWe today, according to the IAEA's most pessimistic scenario**. Nuclear capacity may reach as much as 1,137 GWe in a more favorable investment climate, the Vienna-based agency said. "We are a little bit more optimistic," said Holger Rogner, IAEA head of planning and economic studies, late Tuesday in the Austrian capital. "There is still a case for nuclear power." Japan has about 46 GWe of capacity at 50 reactors and plans to phase out nuclear power in the next three decades in response to the Fukushima Dai-ichi reactor meltdowns last year. The IAEA, established in 1957 to promote the peaceful uses of atomic power, sees growth driven by new reactor projects in China and in newcomer nations such as Turkey and the United Arab Emirates A gigawatt is equivalent to 1 billion watts of electricity. **The driving forces that brought about the renaissance in nuclear power — growing demand in emerging economies, energy security, elevated fossil-fuel prices and climate pressures — haven't changed, Rogner said. The IAEA presented its findings to the organization's 155 members, meeting at their general conference in Vienna. "The feedback we receive is that there is no real retraction from most national power programs**," Rogner said. "What we do see is that some newcomer states have a much better understanding for the need to get things right. Before Fukushima they were a little too optimistic how fast you can move forward the technology." Japan's new policy follows public pressure since the Fukushima disaster caused mass evacuations and left areas north of Tokyo uninhabitable for decades. Germany and Switzerland announced plans to phase out nuclear power after the meltdowns.

**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 U**nited **S**tates, 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 U**nited **S**tates.¶ **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** **U**nited **S**tates, 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 **s**mall **m**odular **r**eactor**s** 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 I**nternational **A**tomic **E**nergy **A**gency. "**They don't want to pull all their eggs in one basket** because of the new kid on the block called shale gas."¶

## 2AC

### Grid

**Grid’s vulnerable and threats are growing---insiders vote aff**

**Merica 12** Dan, CNN, "DoD official: Vulnerability of U.S. electrical grid is a dire concern", July 27, security.blogs.cnn.com/2012/07/27/dod-official-vulnerability-of-u-s-electrical-grid-is-a-dire-concern/

Speaking candidly at the Aspen Security Forum, **one defense department official expressed great concern about the possibility of a terrorist attack on the U.S**. electric **grid that would cause a “long term, large scale outage.**”¶ Paul **Stockton, assistant secretary for Homeland Defense and Americas’ Security Affairs at the D**epartment **o**f **D**efense, **said such an attack would affect critical defense infrastructure at home and abroad** – a thought that Stockton said was keeping him up at night.¶ “**The DOD depends on infrastructure in order to be able to operate abroad. And to make those operations function, we depend on the electric grid**,” Stockton said.¶ **The concern**, Stockton continued, **was that America’s adversaries would avoid attacking “the pointy end of the spear,” meaning combat troops, and would instead look for homeland, possibly non-military, targets**.¶ “**Our adversaries**, state and non-state, **are not stupid. They are clever and adaptive**,” Stockton said. “**There is a risk that they will adopt a profoundly asymmetric strategy, reach around and attack us here at home, the critical infrastructure that is not owned by the D**epartment **o**f **D**efense.”¶ But **Stockton’s concerns were not** solely **limited to terrorist attacks. Other concerning scenarios**, said the assistant secretary, **include geomagnetic disturbances, earthquakes and other natural disasters that could take down the grid**.¶ According to Stockton, **a recurrence of a massive earthquake**, like the New Madrid earthquake of 1812, “**would cause a power outage for weeks to months across a multi-state area, rolling blackouts** in the East Coast…”

**Squo doesn’t solve- DoD cheats**

**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)

In 2008, t**he DOD acquired 2.9% of its electricity from renewable sources, falling just below the** ¶ **goal** but surpassed the 3% goal in 2009 with 3.6% of its electricity coming from renewable ¶ sources.¶ 36¶ However, **these numbers are deceiving. The DOD was only able to surpass this goal** ¶ **with the purchase of R**enewable **E**nergy **C**ertificate**s.** ¶ **When a renewable energy source creates electricity, it creates two commodities: the electricity** ¶ **itself and a Renewable Energy Certificate**. The utility (or whomever owns the energy source) can ¶ sell the electricity and the certificate together in a process called bundling or separately, known ¶ as unbundled energy. For example, **if a military base has a solar array that produces 1MW of** ¶ **electricity, it also creates a certificate for 1MW of electricity. If the base sells the electricity it** ¶ **creates back to the utility, but keeps the certificate, the base can count the 1MW credit towards** ¶ **the renewable energy goal. If the base uses the electricity and keeps the certificate, it can count** ¶ **2MW towards the goal.** Finally, if the base sells the electricity and the certificate, it cannot count ¶ either towards its renewable energy goal. A base can also buy unbundled electricity (the credit or the actual electricity) or bundled electricity from a utility. The **problem with only buying the** ¶ **certificate is that the base still must purchase electricity to power the installation**. **In meeting its renewable energy goal, the DOD does not distinguish between buying Renewable** ¶ **Energy Certificates and the actual use of renewable energy**. The Army with 2.1% and Navy with ¶ 0.6% were well below the 3% goal, and the DOD was only able to surpass the goal because the ¶ Air Force consumed 5.8% of its electricity from renewable sources, but this figure comes mainly ¶ from the purchase of credits.¶ 38¶ The DOD’s FY 2009 Annual Energy Management Report does ¶ not specify what percentage of the energy use came from certificates but does make special ¶ mention of the Air Force’s purchase of certificates. However, the GAO reports that 90% of the ¶ DOD’s renewable energy use came from the purchase of certificates in 2007.¶ 39

**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.

**Efficiency and alt fuels fail**

**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)

In recent years, the U.S. Department of Defense (DOD) has become increasingly interested in the potential of small (less than 300 megawatts electric [MWe]) nuclear reactors for military use.1 **DOD’s attention to small reactors stems mainly from two critical vulnerabilities it has identified in its infrastructure** and operations: the dependence of U.S. military bases on the fragile civilian electrical grid, and the challenge of safely and reliably supplying energy to troops in forward operating locations. **DOD has responded to these challenges with an array of initiatives on energy efficiency and renewable and alternative fuels. Unfortunately, even with massive investment and ingenuity, these initiatives will be insufficient to solve DOD’s reliance on the civilian grid or its need for convoys in forward areas**. The purpose of this paper is to explore the prospects for addressing these critical vulnerabilities through small-scale nuclear plants.

### Econ

**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.**

**Plan solves military oil entanglement**

**Buis ’12**

(Tom Buis, CEO, Growth Energy, Co-written by Buis and Growth Energy Board Co-Chair Gen. Wesley K. Clark (Ret.), “American Families Need American Fuel”, <http://energy.nationaljournal.com/2012/05/powering-our-military-whats-th.php>, May 23, 2012, LEQ)

**Our nation is dangerously dependent on foreign oil**. We import some 9 million barrels per day, or over 3 billion barrels per year; the **U.S. military itself comprises two percent of the nation’s total petroleum use**, making it the world’s largest consumer of energy and oil imports. **Of U.S. foreign oil imports, one out of five barrels comes from unfriendly nations and volatile areas**, including at least 20 percent stemming from the Persian Gulf, including Bahrain, Iraq, Iran, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Further, our nation heavily relies on hot-beds of extremism, as Saudi Arabia, Venezuela, Nigeria are our third, fourth, and fifth, respectively, largest exporters of oil. How dangerous is this? Very! Not only does **America’s huge appetite for oil entangle us into complicated relationships with nations marred by unstable political, economic, and security situations**, it also gravely impacts our military, who risk their lives daily to protect foreign energy supply routes. **Because of our addiction to oil, we have been in almost constant military conflict**, lost more than 6,500 soldiers and created a whole new class of wounded warriors, thousands of whom will need long-term care funded by our government. One in eight soldiers killed or wounded in Iraq from 2003-2007 were protecting fuel convoys, with a total of 3,000 Army casualties alone. **We maintain extra military forces at an annual cost of about $150 billion annually, just to assure access to foreign oil** - **because we know** that **if** **that stream** of 9 million barrels per day **is** seriously **interrupted, our economy will crash. That's what I call dangerously dependent.** Even worse, according to a new Bloomberg Government analysis, **Pentagon spending on fuel is dramatically increasing**. This will force the military to dedicate even more funds toward energy costs, at the expense of other priorities, like training and paying soldiers. In fact, every $.25 increase in the cost of jet fuel makes a $1 billion difference in the Department of Defense’s bottom line – a debt that will be passed along to the American taxpayer. And if that's not enough to make you want to avoid foreign oil, then consider this: every dollar hike in the international, politically-rigged price of oil hands Iran about $3 million more per day, that their regime can use to sow mischief, fund terrorism, and develop missiles and nuclear weapons. Enough is enough! We have domestic alternatives that can protect American interests, and promote prosperity and security – including, more domestic oil production, using natural gas and biofuels, like ethanol, as fuel, converting coal to liquid fuel, and moving as rapidly as possible to vehicles powered by green energy. By introducing clean energy and **fuel alternatives**, this **would rapidly reduce both the strain of securing foreign energy supply routes in unstable regions, as well as unnecessary economic and political entanglement with volatile regimes**. It is imperative the U.S. military leverage its position as a leader and enact pertinent energy policies to best enhance American energy – and national – security.

**These will risk wars that will escalate**

**Collina 5**

(Executive Director of 20-20 Vision, Tom Z. Collina, Executive Director of 20-20Vision; testimony in front of Committee on Foreign Relations Subcommittee on Near Eastern and South Asian Affairs United States Senate “Oil Dependence and U.S. Foreign Policy: Real Dangers, Realistic Solutions”. October 19, 2005 <http://www.globalsecurity.org/military/library/congress/2005_hr/051020-collina.pdf>)

More conflicts in the Middle East America imports almost 60% of its oil today and, at this rate, we’ll import 70% by 2025. Where will that oil come from? Two-thirds of the world’s oil is in the Middle East, primarily in Saudi Arabia, Iran and Iraq. **The United States has less than 3% of global oil. The Department of Energy predicts that North American oil imports from the Persian Gulf will double from 2001 to 2025**.i **Other oil suppliers**, such as Venezuela, Russia, and West Africa, **are also politically unstable and hold no significant long-term oil reserves compared to those in the Middle East**. Bottom line: **our economy and security are increasingly dependent on one of the most unstable regions on earth. Unless we change our ways, we will find ourselves even more at the mercy of Middle East oil and thus more likely to get involved in future conflicts**. **The greater our dependence** on oil, **the greater the pressure to protect and control that oil**. **The growing American dependence on imported oil is the primary driver of U.S.** foreign and **military policy** today, particularly in the Middle East, **and motivates an aggressive military policy** now on display in Iraq. **To help avoid similar wars in the future and to encourage a more cooperative, responsible, and multilateral foreign policy the United States must significantly reduce its oil use.** Before the Iraq war started, Anthony H. Cordesman of the Center for Strategic and International Studies said: “Regardless of whether we say so publicly, we will go to war, because Saddam sits at the center of a region with more than 60 percent of all the world's oil reserves.” Unfortunately, he was right. In fact, **the use of military power to protect the flow of oil has been a central tenet of U.S. foreign policy since 1945**. That was the year that President Franklin D. Roosevelt promised King Abdul Aziz of Saudi Arabia that the United States would protect the kingdom in return for special access to Saudi oil—a promise that governs U.S. foreign policy today. This policy was formalized by President Jimmy **Carter** in 1980 when he **announced that the secure flow of oil from the Persian Gulf was in “the vital interests of the United States of America” and that America would use “any means necessary, including military force” to protect those interests** from outside forces. This doctrine was expanded by President Ronald Reagan in 1981 to cover internal threats, and was used by the first President Bush to justify the Gulf War of 1990-91, and provided a key, if unspoken rationale for the second President Bush’s invasion of Iraq in 2003.ii The Carter/Reagan Doctrine also led to the build up of U.S. forces in the Persian Gulf on a permanent basis and to the establishment of the Rapid Deployment Force and the U.S. Central Command (CENTCOM). **The United States now spends over $50 Billion per year (in peacetime) to maintain our readiness to intervene in the Gulf.**iii **America has tried to address its oil vulnerability by using our military to protect supply routes and to prop up or install friendly regimes. But** as Iraq shows the price is astronomical—$200 Billion and counting. Moreover, **it doesn’t work**—**Iraq is now producing less oil than it did before the invasion.** While the reasons behind the Bush administration’s decision to invade Iraq may be complex, can anyone doubt that we would not be there today if Iraq exported coffee instead of oil? **It is time for a new approach.** Americans are no longer willing to support U.S. misadventures in the Persian Gulf. Recent polls show that almost two-thirds of Americans think the Iraq war was not worth the price in terms of blood and treasure. Lt. Gen William Odom, director of the National Security Agency during President Reagan's second term, recently said: "The invasion of Iraq will turn out to be the greatest strategic disaster in U.S. history." The nation is understandably split about what to do now in Iraq, but there appears to be widespread agreement that **America should not make the same mistake again—and we can take a giant step toward that goal by reducing our dependence on oil.**

### Solvency

**SMRs deployable soon**

**ITA 11**

U.S. Department of Commerce International Trade Administration 11¶ (“The Commercial Outlook for¶ U.S. Small Modular Nuclear¶ Reactors” <http://www.trade.gov/publications/pdfs/the-commercial-outlook-for-us-small-modular-nuclear-reactors.pdf>, SEH)

Although SMRs have significant potential and ¶ the market for their deployment is growing, their ¶ designs must still go through the technical and ¶ regulatory processes necessary to ensure that ¶ they can be safely and securely deployed. Lightwater technology–based SMRs may not be ready ¶ for deployment in the United States for at least ¶ a decade, and advanced designs might be even ¶ further off. Light-water SMRs and SMRs that have ¶ undergone significant testing are the most likely ¶ candidates for near-term deployment, because ¶ they are most similar to existing reactors that ¶ have certified designs and significant operating ¶ histories. NuScale is on track to submit its reactor ¶ design to the NRC by 2012, as is Babcock & Wilcox ¶ for its mPower design. In addition, GE-Hitachi, ¶ which already completed an NRC preapplication ¶ review for its PRISM reactor in 1994, plans to submit its PRISM design for certification in 2012. ¶ With fierce competition for commercial deployment of U.S. SMRs anticipated, the U.S. government is accelerating its efforts to support the ¶ licensing of new reactor designs. The fiscal year ¶ 2011 budget request for the Department of Energy ¶ includes $39 million for a program to support ¶ design certification of SMRs for commercial deployment, as well as a research and development ¶ portfolio that will address the technology development needs of both near- and longer-term SMRs. ¶ The Department of Energy is also in discussions ¶ with several U.S. companies to facilitate the lightwater SMR design certification by the NRC within ¶ a reasonable timeframe. The department also ¶ continues to support research and development ¶ efforts toward advanced reactor designs through ¶ the Advanced Reactor Concepts program, which ¶ focuses on metal-cooled reactor technologies.

**Manufacturing can switch quickly**

**ITA 11**

U.S. Department of Commerce International Trade Administration(“The Commercial Outlook for¶ U.S. Small Modular Nuclear¶ Reactors” <http://www.trade.gov/publications/pdfs/the-commercial-outlook-for-us-small-modular-nuclear-reactors.pdf>, SEH)

**A primary advantage of SMRs is in their production. Their small size means that they do not need ¶ the ultra-heavy forged components that currently ¶ can be made only by Japan Steel Works and Doosan Heavy Industries in South Korea.¶** 7¶ In most of ¶ **the current U.S. SMR designs, the reactor pressure ¶ vessels and other large forgings could be supplied ¶ by domestic vendors, which would create U.S. ¶ jobs and potential exports of SMR components ¶ to international customers**. In addition**, most ¶ SMR designs allow for factory manufacturing, ¶ which could potentially provide opportunities for ¶ cost savings, for increased quality, and for more ¶ efficient production**. **Those attributes mean that ¶ SMRs could be a significant source of economic ¶ growth in the United States.**

#### We have personelle – Navy hired 700 nuclear engineers and new projects spark interest

Wheeler 10/12

(Brian graduated from Northeastern State University in Tahlequah, Okla., in 2005 with a Bachelor’s degree in Mass Communication. He majored in Journalism and minored in Speech Communication. Since graduation, Brian has worked as a newspaper reporter, a magazine freelance writer and most recently as a television news photojournalist and web reporter. Working in television taught Brian how to complete stories in a short time span with breaking news occurring daily. After three years in T.V. news, he joined the PennWell publishing team in March 2010.¶ Brian serves as Editor of Nuclear Power International and Senior Editor of Power Engineering. He also serves as a committee member for the Nuclear Power International Conference and Exhibition and COAL-GEN. “Special Report: Nuclear Power Executive Roundtable” Oct 12, 2012 <http://www.power-eng.com/articles/2012/10/special-report-nuclear-power-executive-roundtable.html>, TSW)

Cheri also mentioned the Navy agreement signed in August in Atlanta. I just got an email stating that 11 officers coming out of the Navy are looking for jobs in the nuclear industry. That’s the first of many, I believe to facilitate the workforce development in our industry.¶ Ashley: We have actually seen a definite resurgence of interest in the nuclear industry. That, and our workload has enabled us to hire about 700 engineers to support our nuclear business line over the past two years. About 25 percent of those were college hires. It wasn’t that long ago when we couldn’t really interest a college hire to come into the nuclear industry. That has changed.¶ There is a strong interest in terms of young engineers taking a more active role in the nuclear industry. At Bechtel, we have over 250 active members in North America Young Generation Nuclear. Those are mostly young engineers and professional under the age of 35. It is very active, and we see that as a developing group that is going to be the future of our industry. In June, we hosted a conference for the Mid-Atlantic region of NAYGN that included about 20 different chapters. Individuals from various companies came to Bechtel Power’s Frederick, Md. office, and participated on their own time. It started Friday night and it was over the weekend. That shows the enthusiasm that this group has for commercial nuclear. I am very optimistic that if we can keep them interested, we can build the next generation of engineers.¶ We also have nearly 200 members of Women in Nuclear and, once again, that shows the diversity of nuclear engineers and gives me reason for optimism. That is one of Bechtel’s strongest missions: preparing the future generation to not only take over supporting the operation of our existing fleet, but also the design and construction of new plants.¶

**Won’t impact SMR**

**Rosner 2011** (Robert Rosner, astrophysicist and founding director of the Energy Policy Institute at Chicago, and Stephen Goldberg, Special Assistant to the Director at the Argonne National Laboratory, Energy Policy Institute at Chicago, November 2011, “Small Modular Reactors: Key to Future Nuclear Power Generation in the U.S.,” online)

The economics for **SMRs directly challenges** two of the **well-established pillars of large LWRs: the** economies of scale and the economies of large nuclear fleet operations (i.e., **large skilled workforce at each plant site**). **The SMR community postulates an alternative cost model based on** the “economies of mass manufacturing.” **The key aspect of this concept is that significant cost savings** can be **realized through more productive use of highly skilled craft labor in the manufacture of the SMR modules and portions of the nuclear island. The labor cost savings are achievable through fabrication of the modules in manufacturing plants** combined with the potential to achieve significant productivity improvements through “learning by doing” in the manufacturing of a large number of reactor modules.

**Plan solves it**

**Squassoni 2009** (Sharon Squassoni, senior associate in the Nonproliferation Program at the Carnegie Endowment and has been analyzing nonprolifera- tion, arms control, and national security issues for two decades, 2009, “Nuclear Energy: Rebirth or Resuscitation?,” Carnegie Endowment for International Peace, http://www.carnegieendowment.org/files/nuclear\_energy\_rebirth\_resuscitation.pdf)

According to a 2008 Bechtel estimate, if electricity demand grows in the United States 1.5 percent each year, and the energy mix remains the same, the United States would have to build 50 nuclear reactors, 261 coal-fired plants, 279 natural gas–fired plants, and 73 renewables projects by 2025 to keep up. All of these will require craft and con- struction labor. According to DOE, **only a portion of** the construction **labor** used to build fossil fuel–fired plants **would have the skills necessary to build nuclear power plants.**89¶ In addition to competing with other electricity projects, nuclear power construction competes with other large investment projects for labor and resources, particularly oil infrastructure. In the United States, rebuilding from Hurricane Katrina and big construction projects in Texas will continue to place pressure on construction labor forces. A Bechtel executive recently stated that the United States will face a skilled labor shortage of 5.3 million workers in 2010, which could rise to a shortage of 14 million by 2020. Adding to this is the retirement of baby boomers, and much slower growth in the number of college gradu- ates.90 Building a nuclear power plant in the United States requires 1,400 to 2,300 construction workers for four or more years. And the permanent labor force of a nuclear power plant numbers between 400 and 500.¶ On the front end of the fuel cycle—uranium exploration, mining, and milling—similar **pressures are being felt, including** a loss of indus- try knowledge, increased regulations and difficulties in mine develop- ment, greater risk for investors, and **a shortage of skilled workers.91**¶It is likely that **these supply issues could resolve themselves within a decade**, with sufficient government policies to reverse some of the de- cline. U.S. nuclear firms have suggested a menu of options, including delays in taxing new domestic nuclear industry until national policy objectives for nuclear manufacturing are met; establishing a nuclear workforce program; and ensuring American access to other nuclear markets.92 The U.S., French, and British nuclear industries are engaged in several efforts to promote growth in the nuclear workforce. In the end, **only a major expansion could help promote nuclear energy as a growth industry that would attract labor and give nuclear suppliers the confidence to expand.** An expansion overseas, however, could siphon off some of these resources.

### Fuel Cells CP

#### Alt fuel cells fail

**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)

In recent years, the U.S. Department of Defense (DOD) has become increasingly interested in the potential of small (less than 300 megawatts electric [MWe]) nuclear reactors for military use.1 **DOD’s attention to small reactors stems mainly from two critical vulnerabilities it has identified in its infrastructure** and operations: the dependence of U.S. military bases on the fragile civilian electrical grid, and the challenge of safely and reliably supplying energy to troops in forward operating locations. **DOD has responded to these challenges with an array of initiatives on energy efficiency and renewable and alternative fuels. Unfortunately, even with massive investment and ingenuity, these initiatives will be insufficient to solve DOD’s reliance on the civilian grid or its need for convoys in forward areas**. The purpose of this paper is to explore the prospects for addressing these critical vulnerabilities through small-scale nuclear plants.

### AT Procure CP

**Plan mandate is for DoD to obtain or get SMR electricity—the CP is a way to implement this**

**SCOTUS 3**, Scheidler v. National Organization for Women, Inc. - 537 U.S. 393 (2003), <http://supreme.justia.com/cases/federal/us/537/393/case.html>

(a) **Petitioners did not commit extortion** **within the Hobbs Act's meaning because they did not "obtain" property from respondents**. Both of the sources Congress used as models in formulating the Hobbs Act-the New York Penal Code and the Field Code, a 19th-century model penal code-defined extortion as, inter alia, the "obtaining" of property from another. **This Court has recognized that New York's "obtaining" requirement entailed both a deprivation and acquisition of property**, see United States v. Enmons, 410 U. S. 396, 406, n. 16, and has construed the Hobbs Act provision at issue to require both features, see, e. g., id., at 400. It is undisputed that petitioners interfered with, disrupted, and in some instances completely deprived respondents of their ability to exercise their property rights. Likewise, petitioners' counsel has acknowledged that aspects of his clients' conduct were criminal. But **even when their acts of interference and disruption achieved their ultimate goal of shutting down an abortion clinic, such acts did not constitute extortion because petitioners did not "obtain" respondents' property**. **Petitioners may have deprived or sought to deprive respondents of their alleged property right of exclusive control of their business assets, but they did not acquire any such property**. **They neither pursued nor received "something of value from" respondents that they could exercise, transfer, or sell**. United States v. Nardello, 393 U. S. 286, 290. **To conclude that their actions constituted extortion would effectively discard the statutory "obtaining" requirement and eliminate the recognized distinction between extortion and the separate crime of coercion**. The latter crime, which more accurately describes the nature of petitioners' actions, involves the use of force or threat of force to restrict another's freedom of action. It was clearly defined in the New York Penal Code as a separate, and lesser, offense than extortion when Congress turned to New York law in drafting the Hobbs Act. Congress' decision to include extortion as a violation of the Hobbs Act and omit coercion is significant here, as is the fact that the AntiRacketeering Act, the predecessor to the Hobbs Act, contained sections explicitly prohibiting both. The Hobbs Act omission is particularly significant because a paramount congressional concern in drafting that Act was to be clear about what conduct was prohibited, United States v. Culbert, 435 U. S. 371, 378, and to carefully define the Act's key terms, including "extortion," id., at 373. Thus, while coercion and extortion overlap to the extent that extortion necessarily involves the use of coercive conduct to obtain property, there has been and continues to be a recognized difference between these two crimes. Because the Hobbs Act is a criminal statute, it must be strictly construed, and any ambiguity must be resolved in favor of lenity. Enmons, supra, at 411. Culbert, supra, at 373, distinguished. **If the distinction between extortion and coercion**, which controls these cases, **is to be abandoned, such a significant expansion of the law's coverage must come from Congress, not from the courts**. pp.400-409.

**Alt financing can buy the reactor!**

**GAO**, April 20**12**, RENEWABLE ENERGY PROJECT FINANCING: Improved Guidance and Information Sharing Needed for DOD Project-Level Officials, http://gao.gov/assets/590/589883.pdf

**Alternative-financing approaches**

[Note: Large chart with host of mechanisms that are included in alternative financing (one of which is power purchasing), the last of which is:]

**Lease-to-own energy production facilities**

**This approach involves the** secretary of a **military** department **entering into an agreement with a private sector entity to “lease-to-own”** certain **facilities** provided at the expense of the contractor **on a military installation**. **At the end of the lease, title to the property would vest in the U**nited **S**tates. **This approach can be used for a variety of facilities, including energy production facilities**. Contract terms may not exceed 32 years.

**Long term contracts key to market signal**

Farrell 11

LIEUTENTANT GENERAL KEN EICKMANN, USAF (RET.) Former Commander, Aeronautical Systems Center, Wright-Patterson Afb, and LIEUTENANT GENERAL LAWRENCE P. FARRELL JR., USAF (RET.), Former Deputy Chief Of Staff For Plans And Programs, Headquarters U.S. Air Force, October 11, Ensuring America’s Freedom of Movement:, http://www.cna.org/sites/default/files/MAB4.pdf

Retired Air Force Lieutenant General Lawrence **Farrell** **sees a** limited, but **important, role for the Pentagon in helping develop alternatives to petroleum.** “I like relying on markets to do what they do well,” said Farrell. “For many years, **market forces have inspired initiative, innovation, and creativity**. I want to keep those forces intact. **But one thing DOD can do well is to be a** sort of **forcing function**. **The Pentagon can say, ‘This is the direction we’re going, guys.’ You let the market know that there will be a consistent demand.”** Changes may be required before **the Pentagon can send** the kinds of **clear signals** **Farrell says are needed**. “**We need to make sure the Pentagon can** effectively **engage in long-term purchasing**,” Farrell said. “**Investors want to know how they’ll get paid back**. If you want to rely on private money to develop alternatives to oil— and I think that’s the right approach—those **investors need to understand there is a strong prospect of return**. So you need this.” Retired Air Force Lieutenant General Kenneth Eickmann believes energy issues should be more visible within the DOD. “For too long, energy issues have been assumed away,” Eickmann said. “With respect to war games, until recently, you could always assume that whatever fuel you want or need is going to be there. We can’t do that anymore. And the same is true in society—we shouldn’t be taking our fuel for granted.” “With greater visibility should come better coordination within DOD, particularly if **one of the goals is to send strong market signals**,” he added.

**Alt financing is key to utility operation of SMRs—CP causes expertise gap**

**GAO**, April 20**12**, RENEWABLE ENERGY PROJECT FINANCING: Improved Guidance and Information Sharing Needed for DOD Project-Level Officials, http://gao.gov/assets/590/589883.pdf

Operation and maintenance of equipment. According to several officials, **the operation and maintenance of equipment is a benefit** **of** most **alternatively financed projects and a drawback of projects funded with up-front appropriations**. **Projects financed with an alternative-financing** approach generally **involve the contractor operating and maintaining the equipment** during the contract period, **whereas the government** typically **is responsible for** the **operation and maintenance of equipment purchased with appropriated funds**. **Officials cited this as a significant benefit of alternatively financed projects**—**and a drawback of** projects funded with up-front **appropriations**—because, according to the officials, **installations often do not have personnel** **on-staff with the knowledge, skills, or expertise to operate and maintain the equipment needed to generate renewable energy**. Officials noted, however, that for projects financed with Energy Savings Performance Contracts or Utility Energy Service Contracts, the contract period could be a relatively short period of time. According to these officials, after the contract period ends, the installation assumes ownership—and therefore the operation and maintenance—of the equipment, which can be a drawback of these two approaches.

**Links to the NB – and tradeoffs turns innovation**

Harrison 11

Todd Harrison, Center for Strategic and Budgetary Analysis, 2011, [www.csbaonline.org/wp-content/uploads/2011/07/2011.07.16-FY-2012-Defense-Budget.pdf](http://www.csbaonline.org/wp-content/uploads/2011/07/2011.07.16-FY-2012-Defense-Budget.pdf)

On January 6, 2011, prior to the official release of the FY 2012 budget request, Secretary of Defense Robert Gates announced the results of his efficiency initiative. The initiative, begun nearly a year ago, identified a total of $178 billion in potential savings over five years (FY 2012 to FY 2016), or six percent of the planned funding over that time period. Some $100 billion of the savings came from the Services and the remainder from defense-wide agencies, a government-wide pay freeze that applies to DoD civilians, and revised economic assumptions.3 Several high-profile weapon systems were affected by the announcement, including the Expeditionary Fighting Vehicle (EFV), the Joint Strike Fighter (JSF), and the Surface-Launched Advanced Medium-Range AirtoAir Missile (SLAMRAAM), which are discussed in more detail in Chapter IV of this report. Of the $178 billion in potential savings identified, $78 billion is being used to reduce total defense spending from FY 2012 to FY 2016 compared to what was projected in the FY 2011 FYDP. For example, the effect on the FY 2012 budget is a reduction of $13 billion from the $566 billion in base discretionary budget authority that was previously planned for FY 2012. The remaining $100 billion in **potential** **savings is being reinvested within the defense budget in high-priority programs and activities, such as a new long-range bomber, next-generation jammer, and carrier-based unmanned strike and surveillance aircraft.** The **funding for** these **new programs**, however, **could be at risk** in future years **if the potential savings identified through the efficiency initiative do not materialize** as projected. **Previous attempts at achieving similar efficiencies have fallen short of their intended goal**. For example, former Secretary of Defense Donald Rumsfeld suggested that DoD could save some $15 billion annually from efficiencies when he took office, roughly 5 percent of the annual budget at the time. But instead of declining, DoD’s peacetime operating costs grew substantially over the years that followed. Current DoD Comptroller Bob Hale wrote in a 2002 report, “After adjusting for changes in force size and inflation, day-to-day operating costs have consistently and persistently increased for decades.” Hale went on to conclude, “These barriers suggest that DoD should be realistic in assessing the prospects for future efficiency savings. **The idea that** multiple tens of **billions of dollars** a year **can be** saved through efficiencies over the next few years—and **used to pay for new programs—is** almost **certainly unrealistic**.”4 Unfunded Priori ties Each year, the Services rank and prioritize items for inclusion in the budget request. Unfunded priorities are those items not included in the budget request because they are a lower priority and do not fit within the funding ceiling set for the Department. The Services’ lists of unfunded priorities, sometimes referred to as “wish lists,” are routinely requested by Congress for consideration during their markup of the budget. The total amount of unfunded priorities grew dramatically over the past decade, rising from $9.5 billion in FY 2001 to a peak of $38 billion in FY 2008 (both figures in FY 2012 dollars). In the FY 2010 budget process, Secretary Gates required the Services to present their unfunded priorities to him for review before submitting them to Congress. Unfunded priorities for that year fell by an order of magnitude to just $3.5 billion. In FY 2011 unfunded priorities fell to $1.8 billion, and in FY 2012 they total only $1.2 billion. Nearly all of the unfunded priorities submitted to Congress are in procurement and O&M. This indicates that **if the Services had additional funding available they would prioritize the maintenance of existing equipment** and would procure additional equipment or spares to augment their inventory.

### Politics

**Political Capital Not Key and Winners Win**

Michael **Hirsh 2/7**, Chief correspondent for National Journal. He also contributes to 2012 Decoded. Hirsh previously served as the senior editor and national economics correspondent for Newsweek, based in its Washington bureau, http://www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207

On Tuesday, in his State of the Union address, President Obama will do what every president does this time of year. For about 60 minutes, he will lay out a sprawling and ambitious wish list highlighted by gun control and immigration reform, climate change and debt reduction. In response, **the pundits will** do what they always do this time of year: They will talk **about how unrealistic most of the proposals are, discussions often informed by** sagacious reckonings of **how much “political capital” Obama possesses to push his program through**. **Most of this talk will have no bearing on what actually happens over the next four years. Consider** this: **Three months ago**, just before the November election, **if someone had talked seriously about Obama having enough political capital to oversee passage of both immigration reform and gun-control legislation** at the beginning of his second term—even after winning the election by 4 percentage points and 5 million votes (the actual final tally)—**this person would have been called crazy** and stripped of his pundit’s license. (It doesn’t exist, but it ought to.) In his first term, in a starkly polarized country, the president had been so frustrated by GOP resistance that he finally issued a limited executive order last August permitting immigrants who entered the country illegally as children to work without fear of deportation for at least two years. Obama didn’t dare to even bring up gun control, a Democratic “third rail” that has cost the party elections and that actually might have been even less popular on the right than the president’s health care law. And yet, **for reasons that have very little to do with Obama’s personal prestige or popularity**—**variously put in terms of a “mandate” or “political capital**”—**chances are fair that both will now happen**. What changed? In the case of gun control, of course, it wasn’t the election. It was the horror of the 20 first-graders who were slaughtered in Newtown, Conn., in mid-December. The sickening reality of little girls and boys riddled with bullets from a high-capacity assault weapon seemed to precipitate a sudden tipping point in the national conscience. One thing changed after another. Wayne LaPierre of the National Rifle Association marginalized himself with poorly chosen comments soon after the massacre. The pro-gun lobby, once a phalanx of opposition, began to fissure into reasonables and crazies. Former Rep. Gabrielle Giffords, D-Ariz., who was shot in the head two years ago and is still struggling to speak and walk, started a PAC with her husband to appeal to the moderate middle of gun owners. Then she gave riveting and poignant testimony to the Senate, challenging lawmakers: “Be bold.” As a result, momentum has appeared to build around some kind of a plan to curtail sales of the most dangerous weapons and ammunition and the way people are permitted to buy them. It’s impossible to say now whether such a bill will pass and, if it does, whether it will make anything more than cosmetic changes to gun laws. But one thing is clear: **The political tectonics have shifted dramatically in very little time. Whole new possibilities exist now that didn’t a few weeks ago.** Meanwhile, **the Republican members of the Senate’s so-called Gang of Eight are pushing hard for a new spirit of compromise on immigration reform**, a sharp change after an election year in which the GOP standard-bearer declared he would make life so miserable for the 11 million illegal immigrants in the U.S. that they would “self-deport.” But this turnaround has very little to do with Obama’s personal influence—his political mandate, as it were. It has almost entirely to do with just two numbers: 71 and 27. That’s 71 percent for Obama, 27 percent for Mitt Romney, the breakdown of the Hispanic vote in the 2012 presidential election. Obama drove home his advantage by giving a speech on immigration reform on Jan. 29 at a Hispanic-dominated high school in Nevada, a swing state he won by a surprising 8 percentage points in November. But the movement on immigration has mainly come out of the Republican Party’s recent introspection, and the realization by its more thoughtful members, such as Sen. Marco Rubio of Florida and Gov. Bobby Jindal of Louisiana, that without such a shift the party may be facing demographic death in a country where the 2010 census showed, for the first time, that white births have fallen into the minority**. It’s got nothing to do with Obama’s political capital** or, indeed, Obama at all. **The point is not that “political capital” is a meaningless term**. Often it is a synonym for “mandate” or “momentum” in the aftermath of a decisive election—and just about every politician ever elected has tried to claim more of a mandate than he actually has. Certainly, Obama can say that because he was elected and Romney wasn’t, he has a better claim on the country’s mood and direction. Many pundits still defend political capital as a useful metaphor at least. “It’s an unquantifiable but meaningful concept,” says Norman Ornstein of the American Enterprise Institute. “You can’t really look at a president and say he’s got 37 ounces of political capital. But the fact is, it’s a concept that matters, if you have popularity and some momentum on your side.” The real problem is that the idea of political capital—or mandates, or momentum—is so poorly defined that presidents and pundits often get it wrong. “Presidents usually over-estimate it,” says George Edwards, a presidential scholar at Texas A&M University. “The best kind of political capital—some sense of an electoral mandate to do something—is very rare. It almost never happens. In 1964, maybe. And to some degree in 1980.” For that reason**, political capital is a concept that misleads far more than it enlightens.** It is distortionary. It conveys the idea that we know more than we really do about the ever-elusive concept of political power, and it discounts the way unforeseen events can suddenly change everything. Instead, **it suggests,** erroneously, **that a political figure has a concrete amount of political capital to invest**, just as someone might have real investment capital—that a particular leader can bank his gains, and the size of his account determines what he can do at any given moment in history. Naturally, any president has practical and electoral limits. Does he have a majority in both chambers of Congress and a cohesive coalition behind him? Obama has neither at present. And unless a surge in the economy—at the moment, still stuck—or some other great victory gives him more momentum, it is inevitable that the closer Obama gets to the 2014 election, the less he will be able to get done. Going into the midterms, Republicans will increasingly avoid any concessions that make him (and the Democrats) stronger. But **the abrupt emergence of** the **immigration and gun-control** issues **illustrates how suddenly shifts in mood can occur and how political interests can align in new ways just as suddenly**. Indeed, **the pseudo-concept of political capital masks a larger truth about Washington that is kindergarten simple: You just don’t know what you can do until you try.** Or as Ornstein himself once wrote years ago, “**Winning wins.**” **In theory, and in practice,** depending on Obama’s handling of any particular issue, **even in a polarized time**, **he could still deliver on a lot of his second-term goals, depending on his skill and the breaks.** Unforeseen catalysts can appear, like Newtown. Epiphanies can dawn, such as when many Republican Party leaders suddenly woke up in panic to the huge disparity in the Hispanic vote. Some political scientists who study the elusive calculus of how to pass legislation and run successful presidencies say that political capital is, at best, an empty concept, and that almost nothing in the academic literature successfully quantifies or even defines it. “It can refer to a very abstract thing, like a president’s popularity, but there’s no mechanism there. That makes it kind of useless,” says Richard Bensel, a government professor at Cornell University. Even Ornstein concedes that the calculus is far more complex than the term suggests. **Winning on one issue often changes the calculation for the next issue;** there is never any known amount of capital. “The idea here is, **if an issue comes up where the conventional wisdom is that president is not going to get what he wants, and he gets it, then each time that happens, it changes the calculus of the other actors”** Ornstein says. “**If they think he’s going to win, they may change positions to get on the winning side. It’s a bandwagon effect.”** ALL THE WAY WITH LBJ Sometimes, **a clever practitioner of power can get more done just because he’s aggressive** and knows the hallways of Congress well. Texas A&M’s Edwards is right to say that the outcome of the 1964 election, Lyndon Johnson’s landslide victory over Barry Goldwater, was one of the few that conveyed a mandate. But **one of the main reasons for that mandate** (in addition to Goldwater’s ineptitude as a candidate) **was** President **Johnson’s masterful use of power** leading up to that election, **and his ability to get far more done than anyone thought possible, given his limited political capital.** In the newest volume in his exhaustive study of LBJ, The Passage of Power, historian Robert Caro recalls Johnson getting cautionary advice after he assumed the presidency from the assassinated John F. Kennedy in late 1963. Don’t focus on a long-stalled civil-rights bill, advisers told him, because it might jeopardize Southern lawmakers’ support for a tax cut and appropriations bills the president needed. “One of the wise, practical people around the table [said that] the presidency has only a certain amount of coinage to expend, and you oughtn’t to expend it on this,” Caro writes. (Coinage, of course, was what political capital was called in those days.) Johnson replied, “Well, what the hell’s the presidency for?” **Johnson didn’t worry about coinage, and he got the Civil Rights Act enacted, along with much else**: Medicare, a tax cut, antipoverty programs. He appeared to understand not just the ways of Congress but also the way to maximize the momentum he possessed in the lingering mood of national grief and determination by picking the right issues, as Caro records. “Momentum is not a mysterious mistress,” LBJ said. “It is a controllable fact of political life.” Johnson had the skill and wherewithal to realize that, at that moment of history, he could have unlimited coinage if he handled the politics right. He did. (At least until Vietnam, that is.) And then there are the presidents who get the politics, and the issues, wrong. It was the last president before Obama who was just starting a second term, George W. Bush, who really revived the claim of political capital, which he was very fond of wielding. Then Bush promptly demonstrated that he didn’t fully understand the concept either. At his first news conference after his 2004 victory, a confident-sounding Bush declared, “I earned capital in the campaign, political capital, and now I intend to spend it. That’s my style.” The 43rd president threw all of his political capital at an overriding passion: the partial privatization of Social Security. He mounted a full-bore public-relations campaign that included town-hall meetings across the country. **Bush failed utterly**, of course. **But the problem was not that he didn’t have enough political capital.** Yes, he may have overestimated his standing. Bush’s margin over John Kerry was thin—helped along by a bumbling Kerry campaign that was almost the mirror image of Romney’s gaffe-filled failure this time—but that was not the real mistake. **The problem was that whatever credibility or stature Bush thought he had earned as a newly reelected president did nothing to make Social Security privatization a better idea in most people’s eyes**. Voters didn’t trust the plan, and four years later, at the end of Bush’s term, the stock-market collapse bore out the public’s skepticism. Privatization just didn’t have any momentum behind it, no matter who was pushing it or how much capital Bush spent to sell it. The mistake that Bush made with Social Security, says John Sides, an associate professor of political science at George Washington University and a well-followed political blogger, “was that just because he won an election, he thought he had a green light. But there was no sense of any kind of public urgency on Social Security reform. It’s like he went into the garage where various Republican policy ideas were hanging up and picked one. I don’t think Obama’s going to make that mistake.… Bush decided he wanted to push a rock up a hill. He didn’t understand how steep the hill was. I think Obama has more momentum on his side because of the Republican Party’s concerns about the Latino vote and the shooting at Newtown.” Obama may also get his way on the debt ceiling, not because of his reelection, Sides says, “but because Republicans are beginning to doubt whether taking a hard line on fiscal policy is a good idea,” as the party suffers in the polls. THE REAL LIMITS ON POWER **Presidents are limited in what they can do by time and attention span**, of course, just as much as they are by electoral balances in the House and Senate. **But this**, too, **has nothing to do with political capital.** **Another well-worn meme of recent years was that Obama used up too much political capital passing the health care law in his first term**. **But the real problem was that the plan was unpopular, the economy was bad**, and the president didn’t realize that the national mood (yes, again, the national mood) was at a tipping point against big-government intervention, with the tea-party revolt about to burst on the scene. For Americans in 2009 and 2010—haunted by too many rounds of layoffs, appalled by the Wall Street bailout, aghast at the amount of federal spending that never seemed to find its way into their pockets—government-imposed health care coverage was simply an intervention too far. So was the idea of another economic stimulus. Cue the tea party and what ensued: two titanic fights over the debt ceiling. Obama, like Bush, had settled on pushing an issue that was out of sync with the country’s mood. Unlike Bush, Obama did ultimately get his idea passed. But the bigger political problem with health care reform was that it distracted the government’s attention from other issues that people cared about more urgently, such as the need to jump-start the economy and financial reform. Various congressional staffers told me at the time that their bosses didn’t really have the time to understand how the Wall Street lobby was riddling the Dodd-Frank financial-reform legislation with loopholes. Health care was sucking all the oxygen out of the room, the aides said. Weighing the imponderables of momentum, the often-mystical calculations about when the historic moment is ripe for an issue, will never be a science. It is mainly intuition, and its best practitioners have a long history in American politics. This is a tale told well in Steven Spielberg’s hit movie Lincoln. Daniel Day-Lewis’s Abraham Lincoln attempts a lot of behind-the-scenes vote-buying to win passage of the 13th Amendment, banning slavery, along with eloquent attempts to move people’s hearts and minds. He appears to be using the political capital of his reelection and the turning of the tide in the Civil War. But it’s clear that a surge of conscience, a sense of the changing times, has as much to do with the final vote as all the backroom horse-trading. “The reason I think the idea of political capital is kind of distorting is that it implies you have chits you can give out to people. It really oversimplifies why you elect politicians, or why they can do what Lincoln did,” says Tommy Bruce, a former political consultant in Washington. Consider, as another example, the storied political career of President Franklin Roosevelt. Because the mood was ripe for dramatic change in the depths of the Great Depression, FDR was able to push an astonishing array of New Deal programs through a largely compliant Congress, assuming what some described as near-dictatorial powers. But in his second term, full of confidence because of a landslide victory in 1936 that brought in unprecedented Democratic majorities in the House and Senate, Roosevelt overreached with his infamous Court-packing proposal. All of a sudden, the political capital that experts thought was limitless disappeared. FDR’s plan to expand the Supreme Court by putting in his judicial allies abruptly created an unanticipated wall of opposition from newly reunited Republicans and conservative Southern Democrats. FDR thus inadvertently handed back to Congress, especially to the Senate, the power and influence he had seized in his first term. Sure, Roosevelt had loads of popularity and momentum in 1937. He seemed to have a bank vault full of political capital. But, once again, a president simply chose to take on the wrong issue at the wrong time; this time, instead of most of the political interests in the country aligning his way, they opposed him. Roosevelt didn’t fully recover until World War II, despite two more election victories. **In terms of Obama’s second-term agenda, what all these shifting tides of momentum and political calculation mean is this: Anything goes**. Obama has no more elections to win, and he needs to worry only about the support he will have in the House and Senate after 2014. **But if he picks issues that the country’s mood will support**—such as, perhaps, immigration reform and gun control—**there is no reason to think he can’t win far more victories than any of the careful calculators of political capital now believe is possible**, **including battles over tax reform and deficit reduction**. **Amid today’s atmosphere of Republican self-doubt, a new, more mature Obama seems to be emerging**, one who has his agenda clearly in mind and will ride the mood of the country more adroitly**. If he can get some early wins**—as he already has, apparently, on the fiscal cliff and the upper-income tax increase—**that will create momentum**, **and one win may well lead to others**. “Winning wins.” **Obama himself learned some hard lessons over the past four years about the falsity of the political-capital concept**. Despite his decisive victory over John McCain in 2008, he fumbled the selling of his $787 billion stimulus plan by portraying himself naively as a “post-partisan” president who somehow had been given the electoral mandate to be all things to all people. So Obama tried to sell his stimulus as a long-term restructuring plan that would “lay the groundwork for long-term economic growth.” The president thus fed GOP suspicions that he was just another big-government liberal. Had he understood better that the country was digging in against yet more government intervention and had sold the stimulus as what it mainly was—a giant shot of adrenalin to an economy with a stopped heart, a pure emergency measure—he might well have escaped the worst of the backlash. But by laying on ambitious programs, and following up quickly with his health care plan, he only sealed his reputation on the right as a closet socialist. After that, Obama’s public posturing provoked automatic opposition from the GOP, no matter what he said. **If the president put his personal imprimatur on any plan**—from deficit reduction, to health care, to immigration reform—**Republicans were virtually guaranteed to come out against it.** But this year, when he sought to exploit the chastened GOP’s newfound willingness to compromise on immigration, his approach was different. He seemed to understand that the Republicans needed to reclaim immigration reform as their own issue, and he was willing to let them have some credit. When he mounted his bully pulpit in Nevada, he delivered another new message as well: You Republicans don’t have to listen to what I say anymore. And don’t worry about who’s got the political capital. Just take a hard look at where I’m saying this: in a state you were supposed to have won but lost because of the rising Hispanic vote. Obama was cleverly pointing the GOP toward conclusions that he knows it is already reaching on its own: If you, the Republicans, want to have any kind of a future in a vastly changed electoral map, you have no choice but to move. It’s your choice. **The future is wide open**.

**Obama proposing multiple competing bills solves**

**Todd et al 2-5**

Chuck is an NBC News’ Chief Political Correspondent, “Flooding the Zone,” <http://firstread.nbcnews.com/_news/2013/02/05/16852487-first-thoughts-flooding-the-zone>

\*\*\* Flooding the zone: Exactly one week away from President Obama’s State of the Union address, **the White House has spent** **the** early days of the **second term flooding the zone with its legislative agenda**. Last week, **the president delivered his big immigration speech** in Las Vegas. Yesterday, **he spoke about gun violence** in Minnesota. Today, he’s meeting at the White House with progressive, labor, and business leaders to discuss immigration reform and the budget situation. What’s going on here: The **Obama** White House **wants to overload Washington’s political circuits** in an effort **to see what it can get through Congress -- without letting Congress define what issues get addressed**. After all, **Republicans want to solely talk about the budget before the March budget showdown** (see yesterday’s multiple coordinated responses by House Republicans on the White House’s announcement it would be late with its budget). Yet **by flooding the zone**, Team **Obama -- with the bully pulpit** and the State of the Union at its disposal -- **wants to widen the political dialogue beyond** that **one issue**. This “**flooding the zone**” concept **is how** the **Obama** White House **operated in the first six months** of the first term, **and it’s where he got most of his legislative achievements**. **When the White House got bogged down on ONE issue** (health care, debt ceiling, etc), **officials determined they lost some of their political capital.**

**Rubio blocks passage**

**Grunwald 2-20**

Michael is Time’s Senior National Correspondent, “Yes, Rubio and Obama Mostly Agree on Immigration. No, that doesn’t mean Reform is Inevitable,” <http://swampland.time.com/2013/02/20/yes-rubio-and-obama-mostly-agree-on-immigration-no-that-doesnt-mean-reform-is-inevitable/>

It’s true that Senator Marco Rubio’s stated principles for comprehensive immigration reform are quite similar to President Obama’s. It’s also true that when Rubio attacks the president over reform, as he did after a White House legislative draft leaked last weekend, he’s signaling to his fervently anti-Obama base that he’s still a solid Tea Party Republican. As I wrote in my Rubio profile, “some of this is Beltway theater; reform could become toxic to Republicans if it’s perceived as Obama-friendly.” This is why smart restrictionists like Mark Krikorian of the National Review as well as smart reformers like Benjy Sarlin of Talking Points Memo seem to agree that Rubio is just posturing, that what really matters are the similarities between his principles and the president’s, that the partisan theater is designed to reduce Republican resistance to bipartisan reform.¶ Well, maybe. Obama did call Rubio in Jerusalem Tuesday night, and both sides expressed ritual optimism. But there are some real differences between Rubio and Obama on immigration. Sure, **Rubio’s rhetoric could** help make reform politically palatable to Republicans, and even help move reform substantively to the right. But it could also **help lay the groundwork for Rubio to scuttle reform, accuse Obama of overreaching, and claim credit for trying to forge a bipartisan solution.** Beltway theater can have real consequences, and **the more Rubio threatens to walk away from any deal that doesn’t include everything he wants, the more pressure he will face to walk away when the deal**, inevitably, d**oesn’t include everything he wants.** Nobody but Rubio knows how far he is willing to bend to cut a deal few of his supporters want with a president most of his supporters despise.¶ (MORE: If Immigration Reform Stalls, Federal Courts Could Have A Say)¶ Remember, in interviews with right-wing talkers like Rush Limbaugh, Mark Levin and Sean Hannity, **Rubio has drawn a series of lines in the sand, pledging to oppose any immigration bill that doesn’t reflect conservative principles**. He said he wouldn’t support any legislation that doesn’t secure the border (whatever that means in practice) and set up an employment verification system (also in the eye of the beholder) before sending undocumented immigrants along a path to citizenship. He insisted that all 11 million undocumented immigrants will have to go to the “back of the line” behind foreigners who followed the rules. He demanded a special “guest worker” program for agriculture. And he said Obama’s draft proposal, by failing to address “future flow” of legal immigrants, would actually make the situation worse.¶ The details of these differences may matter less than the fact that there are so many of them. Rubio has left himself an awful lot of exit ramps on the long and winding highway to bipartisan legislation. Ferocious opposition from right-wing radio helped derail similar reforms during the Bush administration, and everything Rubio is saying is consistent with an effort to try to defuse that opposition. But everything Rubio is saying is also consistent with an effort to get “caught trying,” a phrase the Obama White House uses to describe losing a battle but getting credit for fighting. **Rubio has already taken a stand for reform, so he’s well positioned to try to blame Obama for demanding too much if a deal doesn’t happen**. He’s the only prominent Republican who could make that case en espanol. And it’s hard to think of any Republican who has suffered any political consequences for blaming Obama for anything.¶ “It’s not an if-Obama-is-for-it-we-have-to-be-against-it-mentality,” he told me earlier this month. “There are a lot of points of contention, and they need to be worked through to my satisfaction if I’m going to support the final product.”¶ (MORE: Marco Rubio Responds to Obama’s State of the Union)¶ So it all depends how badly Rubio really wants reform. As I wrote, it’s a personal issue for him. He comes from a family of immigrants, a community of immigrants. It’s hard to imagine a more influential lobbyist than his mom. He’d also like to transcend his reputation as an achievement-free ideologue; brokering a reform deal would show he’s capable of getting stuff done. And ever since Hispanic voters overwhelmingly rejected Mitt Romney and his “self-deportation” theories, many Republican elites have been warning that the party may be doomed in presidential elections until it can get the immigration issue off the table.¶ But if **Rubio wants to get elected president in 2016, he’ll need to win a Republican primary dominated** not by elites, but **by Tea Party activists who think of the undocumented as freeloaders** and the president as a nightmare. They’re a lot likelier to trust a guy who denied Obama a major victory than a guy who helped him achieve it. Rubio also has to worry about House Republicans (who generally live in fear of their own Tea Party primary challenges) derailing the reform train while he’s still on it, which would make him look ineffectual as well as Obama-appeasing. And the 2016 Republican presidential primary is starting now, while the general election won’t start until 2016; there would be plenty of time for Rubio to pivot back to reform if he won the nomination. Anyway, **if Republicans decide that winning back Hispanics is their key to winning back the White House, Marco** Antonio **Rubio will have a leg up whether reform happens or not.**¶ (PHOTOS: Marco Rubio, Republican Savior)¶ For now**, if Rubio’s swipes at Obama help keep the Limbaughs and Levins of the world from launching an anti-reform crusade, they’re probably helping the cause of reform**. And he’s got nothing to lose by pressing Obama to accept stricter enforcement, a more arduous path to citizenship, and other items on conservative wish lists. But **eventually, there’s going to be a deal, and he’s going to have to decide whether to take it.** **With me, at least, he didn’t sound all that optimistic**.¶ “I’m not trying to throw cold water on the effort,” he said. “It’s a good effort, an important effort. But we have to be realistic about the pitfalls that lie ahead. This is a very difficult problem that the country hasn’t solved in over two decades.”

**Sequester Thumps**

AFP 2-20

Agence-France Press 2-20

“What is the Sequester and Why does it Matter,” <http://www.rawstory.com/rs/2013/02/20/what-is-the-sequester-and-why-does-it-matter/>

Privately, **White House officials believe that pressure on Republicans will get so great** that **they will be forced into a spending and revenues deal.**¶ The politics seem to favor the president — he is more popular than Republicans and polls show voters like the idea of more taxes for the rich.¶ **The danger for Obama is that if the sequester is not quickly fixed** and **the economy is damaged his presidential legacy is on the line**.¶ **Political capital he needs to drive through key second-term agenda items such as immigration reform and gun control could also be tarnish**ed.¶ Obama will crank up the blame game next week with campaign-style visits to regions likely to be hit by the sequester cuts.¶ Republicans are betting that apocalyptic scenarios of job losses, limp border enforcement and lax military readiness will not unfold immediately on March 1.¶ Conservatives think the president wants a solution more than they do so see the onus as on him to carve deeper spending cuts than he has so far offered.¶ Typically for Washington, everyone may look for a face saving way out — whether or not it fixes long-term deficit problems.¶ A new “continuing resolution” must be passed by Congress to maintain funding for government operations by the end of March.¶ Many observers believe both sides could use this mechanism to compromise on spending and revenues and fix the sequester retroactively.

#### Plan’s popular

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 of 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.

#### DoD doesn’t link

**Appelbaum 12**

Binyamin, Defense cuts would hurt scientific R&D, experts say, The New York Times, 1-8, <http://hamptonroads.com/2012/01/defense-cuts-would-hurt-scientific-rd-experts-say>

Sarewitz, who studies the government's role in promoting innovation, said **the Defense Department had been** more successful **than other federal agencies because it is the** main user of the innovations that it finances**.** **The Pentagon, which spends billions** each year on weapons, equipment and technology, **has an** unusually direct stake in the outcome **of its** research and development **projects.**¶ "The central thing that distinguishes them from other agencies is that they are the customer," Sarewitz said. "You can't pull the wool over their eyes."¶ **Another factor is the Pentagon's relative insulation from politics, which has allowed it to sustain a long-term research agenda** in controversial areas**. No matter which party is in power,** **the Pentagon has continued to invest in clean-energy tech**nology, **for example,** in an effort to find ways to reduce one of its largest budget items, energy costs.

**Nuke lobby supports- guarantees bipart support**

**Samuelsohn ‘11** (Darren Samuelsohn, March 16, 2011, “Nuclear industry lobbyists' clout felt on Hill,” Politico, <http://www.politico.com/news/stories/0311/51367.html>)

Facing its biggest crisis in 25 years, the U.S. nuclear power industry can count on plenty of Democratic and Republican friends in both high and low places.¶ During the past election cycle alone, the Nuclear Energy Institute and more than a dozen companies with big nuclear portfolios have spent tens of millions of dollars on lobbying and campaign contributions to lawmakers in key leadership slots and across influential state delegations.¶ The donations and lobbying funds came at a critical moment for the nuclear industry as its largest trade group and major companies pushed for passage of a cap-and-trade bill.¶ While that effort failed, the money is sure to **keep doors open** on Capitol Hill as lawmakers consider any response to the safety issues highlighted by multiple nuclear reactor meltdowns in Japan in the aftermath of last week’s monster earthquake and tsunami.¶ “The bottom line is you’ve got a variety of industrial interests that care about nuclear power and have a heck of a lot of money to spend if their business and their bottom line is put in political jeopardy,” said Dave Levinthal, communications director at the Center for Responsive Politics. “As Congress is talking about potentially diving deeper, these companies bring a lot of resources and a heck of a lot of cash to bear if tDhis fight goes forward.”¶ NEI, the industry’s biggest voice in Washington, for example, spent $3.76 million to lobby the federal government and an additional $323,000 through its political action committee on a bipartisan congressional slate, including 134 House and 30 Senate candidates, according to data compiled by the CRP.¶ Alex Flint, NEI’s senior vice president for government affairs, said the spending is a byproduct of record high demand for his industry.¶ “The fact that the day after the election, both the president and [House Speaker John Boehner] said nuclear was an area where it’s something they can agree, it’s made us that much more in demand,” Flint said. “Our lobbying expenses have gone up more in large part because we have more people talking to more members of Congress.”

**XO solves**

**The Hill 2-16**

“Dems: Obama can Act Unilaterally on Immigration Reform,” <http://thehill.com/blogs/regwatch/administration/283583-dems-recognize-that-obama-can-act-unilaterally-on-immigration-reform>

President **Obama** can – and **will – take steps on immigration** reform in the event Congress doesn't reach a comprehensive deal this year, according to several House Democratic leaders.¶ While the Democrats are hoping Congress will preclude any executive action by enacting reforms legislatively, they say **the administration has the tools to move unilaterally if the bipartisan talks** on Capitol Hill **break down**. Furthermore, they say, **Obama stands poised to use them**.¶ "I don't think the president will be hands off on immigration for any moment in time," Rep. Xavier Becerra (D-Calif.), the head of the House Democratic Caucus, told reporters this week. "He's ready to move forward if we're not."¶ Rep. Joseph Crowley (N.Y.), vice chairman of the Democratic Caucus, echoed that message, saying Obama is "not just beating the drum," for immigration reform, "he's actually the drum major."¶ "There are limitations as to what he can do with executive order," Crowley said Wednesday, "but he did say that if Congress continued to fail to act that he would take steps and measures to enact common-sense executive orders to move this country forward."¶ Rep. Raul Grijalva (D-Ariz.), who heads the Congressional Progressive Caucus, said there are "plenty" of executive steps Obama could take if Congress fails to pass a reform package. "**The huge one**," Grijalva said, **is** "the **waiving** of **deportation**" in order to keep families together.¶ "Four million of the undocumented [immigrants] are people who overstayed their visas to stay with family," he said Friday. "So that would be, I think, an area in which … there's a great deal of executive authority that he could deal with**."**¶ **The administration could also waive visa caps**, Grijalva said, **to ensure that industries like agriculture have ample access to low-skilled labor.**¶ "Everybody's for getting the smart and the talented in, but there's also a labor flow issue," he said.

**No impact to bioterror**

**Mueller 10**

[John, Woody Hayes Chair of National Security Studies at the Mershon Center for International Security Studies and a Professor of Political Science at The Ohio State University, A.B. from the University of Chicago, M.A. and Ph.D. @ UCLA, Atomic Obsession – Nuclear Alarmism from Hiroshima to Al-Qaeda, Oxford University Press]

Properly developed and deployed, biological weapons could potentially, if thus far only in theory, kill hundreds of thousands, perhaps even millions, of people. The discussion remains **theoretical** because biological weapons have scarcely ever been used. For the most destructive results, they need to be **dispersed** in very **low-altitude** aerosol clouds. Since aerosols do not appreciably settle, pathogens like anthrax (which is not easy to spread or catch and is not contagious) would probably have to be sprayed **near nose level**. Moreover, **90 percent** of the microorganisms are likely to **die** during the process of aerosolization, while their effectiveness could be reduced still further by **sunlight**, **smog**, **humidity**, and **temperature changes**. Explosive methods of dispersion may destroy the organisms, and, except for anthrax spores, long-term **storage** of lethal organisms in bombs or warheads is difficult: even if refrigerated, most of the organisms have a **limited lifetime**. Such weapons can take days or **weeks** to have **full effect**, during which time they can be **countered** with medical and civil defense measures. In the summary judgment of two careful analysts, delivering microbes and toxins over a wide area in the form most suitable for inflicting mass casualties-as an aerosol that could be inhaled-requires a delivery system of **enormous sophistication**, and **even then** effective dispersal could **easily be disrupted** by unfavorable environmental and meteorological conditions.

### K

**We have a moral obligation to advocate nuclear---any alternative results in extinction due to warming**

**Baker 12**—Executive Director of PopAtomic Studios, the Nuclear Literacy Project (7/25/12, Suzy, Climate Change and Nuclear Energy: We Need to Talk, ansnuclearcafe.org/2012/07/25/climate-change-and-nuclear-energy-we-need-to-talk/)

Ocean Acidification¶ While I was making artistic monuments to single celled organisms in the ceramics studio, new research was emerging about ocean acidification affecting these beautiful and integral pieces of our ecosystem. **As the ocean absorbs excess carbon** from humans burning fossil fuels, **the pH of the ocean is rapidly changing**. This means that **our** ancient **oxygen-making pals cannot properly do their job**. As their ocean home becomes inhospitable, **they are dying off in droves**. **This not only impacts the ocean’s ability to naturally sequester** man made **carbon** emissions; **it** also **negatively impacts the entire food chain**, since they are the primary food source for other multi-cellular ocean creatures, some of which we enjoy eating.¶ Oh, and **did I mention that these** little **phytoplankton are** also **responsible for creating the ozone layer that protects all life on the planet from** cosmic **radiation**, **and they churn out** 70-**80% of the oxygen** **we breathe?** These creatures are much more than just a pretty floating form.¶ **Ocean acidification is the issue that brought me to supporting nuclear energy**. Ocean acidification is an often-overlooked aspect of climate change that is potentially more threatening than the heat, the super storms, the fires, the drought, the crop losses, and all of the other trends that we are seeing now, which climate scientists have been warning us about for decades.¶ Climate Change and Nuclear Energy: Like Oil and Water?¶ It didn’t take long for me to find out that in the nuclear industry, climate change is not something we all agree on. Discussing climate change as a concern is often polarizing, and brings up intrinsic conflicts of interest in the larger energy sector (the companies who design/build/run the nuclear plants also happen to design/build/run the fossil fuel plants). I’ve been advised by people who deeply care about me, and the success of my organization, not to bring up climate at all, and to be extremely careful not to base my support of nuclear on climate issues. I’ve also been specifically advised not to make the argument that nuclear energy is the only solution to climate change.¶ When you are the new kid, it is usually best not to make waves if you can help it. So, for the most part, I have heeded that advice and held my tongue, despite myself.¶ However, **as I** watch the news (and my wilting vegetable garden) and **see the magnitude of human suffering** that is **directly related to increasingly severe weather events**, **I cannot keep silent**. **Climate change is why I am here supporting nuclear energy, so what am I doing not talking about it?¶** The CEO of Exxon Mobile recently made clear that despite his company’s acknowledgement of the irrefutable evidence of climate change, and the huge ecological and human cost, he has no intentions of slowing our fossil fuel consumption. In fact, he goes as far to say that getting fossil fuels to developing nations will save millions of lives. While I agree that we need stronger, better energy infrastructure for our world’s poorest nations, I wholly disagree that fossils are the right fit for the job.¶ Fossil fuel usage could be cast as a human rights issue only to the extent that access to reliable and affordable electricity determines what one’s standard of living is. At the same time, **fossil fuel usage is the single largest threat to our planet and every species on it**. **Disregarding the impacts that fossil fuel use poses**, merely to protect and increase financial profits, **is unethical**, and cloaking fossil fuel use as a human rights issue is immoral.¶ Although we are all entitled to our own opinions and beliefs, **the idea that climate** change **and ocean acidification** **are** even **up for debate** **is not reasonable**. Just think: **The CEO of the largest fossil fuel** **company in America freely speaks out about climate change, while nuclear energy advocates are pressured to stay silent** on the subject.¶ **Silence is No Longer an Option**¶ I am someone who avoids conflict, who seeks consensus in my personal and professional lives, and so I have followed the advice of well-meaning mentors and stayed silent in hopes of preserving a false peace within my pro-nuclear circles, including my family and friends. But my keeping silent is now over— starting here and starting now—**because this is too big and too important to stay silent.** I am not alone in believing this, and the nuclear industry does itself no favors by tacitly excluding the growing movement of people who are passionate about the need to use nuclear energy to address climate change.¶ And **nuclear power is the only realistic solution**. **It would be great if there were** also **other viable solutions** that could be easily and quickly embraced; **however, the numbers just don’t work out**. **Renewables** and conservation **may have done more good if we had utilized them on a large scale 40 years ago**, when we were warned that our ecosystem was showing signs of damage from fossils fuels…**but** at this point **it’s really too late** for them. And burning more fossil fuels right now, when we have the technologies and know-how to create a carbon-free energy economy, would be the height of foolishness.¶ **In the meantime, there is real human suffering, and we here in the developed world are directly causing it. Our poorest brothers and sisters cannot escape the heat.** **They cannot import food when their crops fail.** They cannot buy bottled water when there is a drought. **They cannot “engineer a solution”** any more than my childhood friends the phytoplankton can.¶ ¶ Energy Choices as an Ethical Obligation¶ **We have an ethical obligation to stop killing people with our energy consumption**. That statement may sound oversimplified, but let’s be honest—we know that fossil fuels kill approximately 1.3 million people each year through respiratory diseases and cancers, and the death toll for climate change related events rises every day. Yet, we do nothing but dither about climate change politics. Where is the outrage?¶ The fossil fuel industry has been successful at presenting a united front and maintaining consistent strategic communications. In contrast, the safety record and clean energy contributions of nuclear are always overshadowed by politics favoring fossil fuel use. If anything, nuclear advocates should be particularly sensitive that the very same politics are happening with climate science.¶ **We should be championing nuclear energy as a science-based solution, instead of enforcing a meek code of silence**. People from outside the nuclear industry, like Gwyneth Cravens, Barry Brooks and Tom Blees, have pointed out these relationships, yet the nuclear industry has yet to internalize and accept these realities.¶ **How can we expect people to listen to science and not politics when it comes to nuclear energy, but not climate change?¶** Disagreeing with a policy does not change the facts. You can disagree with policy to limit carbon emissions, but that doesn’t change the fact that our fossil fuel consumption is changing the PH of our oceans. **Many people disagree with the use of nuclear energy, but that doesn’t change the fact that nuclear is our largest source of carbon free electricity and the safest source of electricity per kilowatt hour.¶** Nuclear Must Lead by Example¶ **If we want the public to overcome the cognitive dissonance between science and policy when it comes to nuclear energy, we need to lead by example and overcome our own cognitive dissonance when it comes to climate change** — even if it means risking our own interests as members of the larger energy industry. We are not going to run out of fossil fuels any time soon, so the decision to move to carbon-free energy—to move to nuclear energy—must be made willingly, and based on ethical principles, not the limits of our natural resources.¶ As green groups wait endlessly for renewable technologies to have some kind of breakthrough, and nuclear supporters stay mum on climate change, we continue using fossil fuels. Our collective inaction is allowing the destruction of our planet’s ecosystem, the dying of our oceans, and the suffering of the poorest members of our own species. The climate conversation has become so convoluted by politics and greed that many smart, compassionate people have “thrown in the towel.” We should be more concerned than ever at our lack of a comprehensive global response.¶ I strongly believe that **there’s still time to reclaim the dialogue about climate change based on ocean acidification evidence, and to use nuclear technologies to improve the long-term outcome for our planet** and our species. **The first step is acknowledging the complicated** and unique **role of the nuclear industry in this conflict**, **and the conflicts of interest that are impeding open communication.** The second step is to realize that the climate change community is a potential ally, and that openly addressing the subject of climate change in our communications is in the best interest of the nuclear community. The third step is choosing to do the right thing, not just the polite thing, and reclaim our legitimate role in the energy community as the “top dog” of carbon-free electricity, instead of quietly watching natural gas become “the new coal.”¶ Climate change is not going away—it is getting worse—and **each one of us** in the nuclear community **has an ethical obligation to speak up and to do something about it**. I am speaking up for the oceans, for the cyano-bacteria and diatoms and our shared mitochondrial RNA that still fills me with wonder at the beauty of this world. Please join me if you can, to speak up for what you love—and if you cannot, please understand that we all remain nuclear advocates, and that the nuclear community is much stronger with the no-longer-silent climate change harbingers in it.

### Water

**Indo-Pak water scarcity is coming. Warming ensures migration and decreased rainfall which makes a war over the Indus necessary because it fuels 90% of agriculture which means there is an economic incentive to act, and agreements are collapsing in the squo. Causes extinction. Stress is increasing, diplomacy is decreasing, and talks are only heightening suspicions. Asymmetry ensures the weaker side will use nukes. That’s Priyadarshi and Zahoor**

**Allouche agrees that water causes wars – he just think they’ll stay small**

**Allouche 11**

Research Fellow – water supply and sanitation @ Institute for Development Studies, frmr professor – MIT (Jeremy, “The sustainability and resilience of global water and food systems: Political analysis of the interplay between security, resource scarcity, political systems and global trade,” Food Policy, Vol. 36 Supplement 1, p. S3-S8, January)

Overall, it seems clear that perceived resource scarcity is not an adequate explanation for war at the international level. At the national level, **water and food insecurity are relatively important factors in the causes of civil wars**. At the local level, **water scarcity and food insecurity may lead to local political instability and sometimes violent forms of conflict**. **Armed conflict creates situation of emergency food and water insecurity and has a long-term impact on post-conflict societies**. In the near future, it seems that despite climate change, international resource wars are unlikely and resource allocation will be settled through diplomatic negotiation and perhaps most importantly international trade as will be discussed in the next section.

**Thousands of years of data prove**

**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**.

**Only our authors account for upstream-downstream relations**

**Pearce 9**

<http://seedmagazine.com/content/article/the_truth_about_water_wars/>¶ Fred Pearce is an environmental journalist and author of numerous books, including When the River Runs Dry: Water—The Defining Crisis of the 21st Century.

 **Water**, unlike land, is hard to “capture.” It flows. **As Barnaby points out,** countries have a lot of reasons for cooperating over water that flows between nations. And many do. She’s also right in acknowledging the importance of trade in thirsty products like food—often termed “virtual water.” **There would have been many more wars in the Middle East in the past 30 years but for this trade**, which keeps Egypt, Jordan, and others fed. **But** **that** approach **will not always work.** There are serious potential conflicts around the world where **upstream countries can withhold water from arid downstream countries** that need or want it. **India and Pakistan** constantly bicker over the Indus. How long will a fully functioning Iraqi state settle for Turkey controlling the flow of the Tigris and Euphrates with large dams? Meanwhile **Egypt’s insistence on its prior right to the majority of the flow of the Nile** is an unresolved tension afflicting a quarter of a continent. If **wars arise over grievances**, then **water is a common source of grievances** between nations. Israeli and Palestinian technocrats may cooperate over day-to-day water management, but that does not stop an absolute ban, imposed by Israel, on West Bank Palestinians sinking new wells to tap water beneath their feet. Water is a major grievance there. And **as water shortages become more intense** in much of the world over the coming decades, **the potential for conflicts will grow.** It is dangerous to “blame” a resource like water for wars. It can too easily become an excuse for failing to resolve conflicts. To “blame” water for genocide in Sudan is obscene. But to go to the other extreme and deny water as a potential factor in wars is equally foolish. Yes, management of water can become a meeting point for nations as well as a source of conflict. But many rivers and other sources of water that cross international boundaries are today not subject to treaties for sharing. That is dangerous. **If we are to avoid water wars, there is an urgent need for more water diplomacy**.

**Warming takes out any chance for domestic solutions**

**Tir ‘10**

(Jaroslav, PhD, University of Illinois, Urbana-Champaign, 2001) Dr. Tir's specialty is international relations, with a focus on causes and management of armed conflicts. His research spans the topics of territorial disputes, environmental conflict and security, domestic and ethnic conflict, and diversionary theory of war. Dr. Tir's work has been published in outlets such as the American Journal of Political Science, Journal of Politics, Journal of Conflict Resolution, Journal of Peace Research, International Studies Quarterly, Conflict Management and Peace Science, and others, and Douglas, assistant professor in the Department of International Affairs in the School of Public and International Affairs at the University of Georgia, “Coping with the Consequences of Climate Change: International Institutions as Strategies for Mitigating Conflict over Water Resources,” AM)

Aside from triggering disputes, **climate-induced water stress can lead to the escalation of those disputes over rivers and increase the use of coercive diplomacy.** Whereas competing uses of a water source might be manageable politically during normal times, **conditions of scarcity can make states less likely to wait for diplomatic options to resolve conflicts**. For example, the increased sensitivity to water issues can lead to a more combative response to the damming of a river. **Downstream states may use threats or** overt **military force as a bargaining tactic to coerce upstream states into limiting water diversion**. The increased value of the water source to both sides will zone of agreement shrink and increase the attractiveness of coercive bargaining. This expectation has received some empirical support. **In a study** of competing river claims, **Hensel, Mitchell, and Sowers** (2006) **find that water scarcity increases the likelihood of militarized conflicts between states with an existing riparian dispute.** **This has been the case with the political and military tensions between Syria and Turkey,** due to construction by Turkey of dams on the Euphrates. **A similar dynamic has also occurred in the Nile basin**, with Egypt opposing diversion attempts by upstream states.

## 1AR

### Procurement CP

**Causes years delay**

**McCormick, 12**

(“Interview with Colin McCormick,” This interview was conducted with Dr. Colin McCormick, (Senior Advisor for R&D in the Office of the Under Secretary at the Department of Energy. He previously served as the Team Lead for Emerging Technologies in the Building Technologies Program of the Office of Energy Efficiency and Renewable Energy (EERE). Prior to joining the Department of Energy he was an energy and security analyst at the Federation of American Scientists, a staff member with the House Science and Technology Committee, and an AAAS Congressional Fellow on the staff of Rep. Ed Markey of Massachusetts. Dr. McCormick received his PhD in atomic and optical physics from the University of California, Berkeley, and did post-doctoral work in quantum optics at the National Institute of Standards and Technology (NIST) in the group of 1997 Physics Nobel Laureate William Phillips. Dr. McCormick reviewed, revised and approved the below text for publication. Specifically, this interview began as discussions that took place on October 17, 2012 and October 22, 2012, with questions being asked by members of GWDebate (Francisco Bencosme, Kevin Bertram, Lauren Cashmore, Paul Hayes, Joseph Nelson and Kyla Sommers). 10/17, http://debateandtherealworld.com/article.php?id=3)

D+TRW: What is your view on the suggestion that the DOD should pursue its own SMR or nuclear project apart from the DOE? McCormick: The DOD could build their own lab to research nuclear power, but that would be very inefficient and duplicative. It would also hire people away from DOE labs that are working on important projects. The DOD would have to build equipment, test chambers, radiation shields, etc. All of that already exists and is used at the DOE labs. It would seem very wasteful to try to pursue that. It would also delay efforts, for several years easily. The DOD does have laboratory infrastructure, but if you wanted to actually build nuclear test infrastructure, you would have to find a site not near population centers, would then have to have the site inspected by the NRC. And that's true even when it's the military. That would be a very long start up time. Not to mention extremely costly.

**Appropriations fail**

**GAO 9**, “Defense Infrastructure: DOD Needs to Take Actions to Address Challenges in Meeting Federal

Renewable Energy Goals”, December, <http://www.gao.gov/assets/300/299755.html>

According to DOD officials, **entering into alternative financing approaches to develop renewable energy projects offers** three main **advantages to DOD**. First, certain **alternative financing approaches may be more cost-effective than DOD-funded and DOD-owned development** **of larger renewable energy projects**. **According to DOD officials, entering into alternative financing approaches to develop renewable energy projects may increase the likelihood of developing these projects on DOD land. This is because private developers have more options than DOD when it comes to obtaining project financing**. For instance, **developers can sell either the project's energy or renewable energy certificates to a third party, such as the local utility**. However, DOD officials stated that **DOD cannot make these types of sales**. In addition, according to DOD officials, in some cases, **private developers are able to accept renewable energy incentives, such as tax credits, that DOD cannot claim**. The second advantage, according to DOD officials, is that **the government can realize significant benefits when renewable energy projects are owned by private developers because the contractor may provide operation and maintenance of the equipment**. For example, officials at an **Air Force** installation we visited explained that their **maintenance staff does not have anyone with the expertise to operate and maintain the installation's renewable projects**, and because contractors perform these functions, the installation does not need to hire additional staff to perform these tasks. Finally, although the services use up-front appropriated funding to develop smaller renewable energy projects, DOD officials explained that **up-front appropriated funding may be a poor fit for developing the larger, higher-cost renewable projects** that a key official says are necessary to achieve the renewable energy goals. According to GAO analysis of DOD project data, the services primarily use two types of up-front appropriated funding for smaller renewable projects: the Energy Conservation Investment Program, funded with a military construction account, and the operations and maintenance accounts. Because the total amount of annual Energy Conservation Investment Program funding is divided among **the services**, officials explained that they **are limited in the amount of resources they can commit to a high- cost project** from that account. According to DOD, OSD generally grants Energy Conservation Investment Program funding for potential renewable projects based on analysis of the project's life-cycle costs; the less an installation's energy costs, the less likely it may be to receive funding from that account. Because many DOD installations pay low rates for utility-delivered electricity, their proposals for Energy Conservation Investment Program funds to develop renewable projects are often not selected, increasing the challenge DOD faces in funding projects that meet the criteria for funding. According to DOD officials, **operations and maintenance funding may also be difficult to use for the development of the large, higher-cost renewable projects** that the services plan to develop to meet DOD's renewable energy goals. For instance, according to an Army official, the service considered building a 35-megawatt concentrated solar thermal plant. If completed, this project would be one of the largest on DOD land. According to this official, the Army estimated that the project would require an estimated $1.8 billion in appropriated funding. **Because annual allocations of operations and maintenance funding are typically limited to $750,000 per project**,[Footnote 43] **these funds may not be sufficient to fund such large, costly projects**. Although **DOD has** developed many small renewable energy projects with upfront appropriated funding, it has **relied on alternative financing approaches for its** relatively few **large renewable energy projects**. For example, GAO analysis of DOD data indicates that while the majority--74 percent--of renewable energy projects are funded using up-front appropriations, these projects only generate 13 percent of renewable energy produced on DOD land. In contrast, **while only 18 percent of projects are funded using alternative financing, these projects generate the majority--86 percent--of renewable energy produced on DOD land**.

### Politics

**Won’t Pass- High Skilled problems**

**Garrett 2-20**

Major is a National Journal Columnist, “The Hidden Obstacles to Legal Immigration Reform,” <http://www.nationaljournal.com/columns/all-powers/the-hidden-obstacles-to-legal-immigration-reform-20130219?page=1>

But if you think questions of legalization, border security, and fundamental party politics are the biggest obstacles to reform, think again.¶ The toughest issue may be legal immigration. You know, the issue everyone is for. Who is against legal immigration? Obama is for it. Mitt Romney was for it. Our entire history is suffused with the narrative of dreams that began at the golden door first opened by legal immigration. We all agree, right? Think again.¶ Legal immigration is much tougher than that. It’s the stunningly underappreciated policy linchpin to reform. Its politics are even more complicated than border security or legalization of undocumented workers. And the White House draft said nothing about it. Nothing. The president’s speech in Nevada on Jan. 29 was similarly vacuous. The White House insists it has a plan, and Obama’s May 10, 2011, speech in El Paso made a glancing reference to helping immigrant entrepreneurs stay and create jobs and a way for seasonal agricultural workers to stay legally in America. That was it.¶ Legal immigration is far more complex. If Obama and Congress don’t create a workable balance of future legal immigration — in the argot, “future flow” — it might as well give up. Why? Because that’s what Congress did with the 1986 immigration reform act. It legalized 3 million undocumented workers here, didn’t tighten border security, and created a legal immigration system so small (in numbers) and slow (in terms of approval) that illegals flooded across the border for jobs in a variety of industries. That will happen again unless new numbers and rules are applied to all variety of work and immigrant applicants for it. It is for this reason that Republicans — chief among them non-savior Marco Rubio, the senator from Florida — cannot and will not accept immigration reform that does not rewrite legal immigration rules.¶ Legal immigration is now the subject of intense outside negotiations between the AFL-CIO and the U.S. Chamber of Commerce (which are aligned in pursuit of reform, unlike in 2007), as well as other stakeholders. Business wants actual job demands to determine how many visas are issued for all varieties of work. Big labor wants — get ready — a commission to review the needs and decide how many visas should be allocated. There’s no resolution. Yet. The White House eyes this intense debate with Sphinx-like inscrutability. ¶ It’s a high-stakes fight over an alphabet soup of visas, which includes but is not limited to H-1B for immigrants with highly specialized “theoretical and practical” knowledge suitable for high-tech jobs; H-2A for seasonal agricultural workers who pick crops; H-2B for peak-season nonagricultural workers who toil at theme parks, hotels, restaurants, and ski resorts; and H-4 for the family members (nonworking spouses and children) of H-2A and H-2B workers, who are desperate to legally live in America.¶ According to the State Department, there were 117,409 H-1B visa recipients in 2010 and 129,134 in 2011 — not nearly enough, according to business leaders and those eager to keep top-performing immigrant specialists here. The Washington Post on Tuesday wrote of student visa recipients from India who have invented a “world-changing” system to decontaminate water from hydraulic fracking. They may have to leave America and take their plans to hire 100 employees to India or elsewhere. The story said that places like China, Canada, Germany, Australia, and Singapore are dangling cash and other incentives before visa-limited American innovators such as these.¶ And what about the workers who wash dishes, change sheets at hotels, mow resort golf courses, and provide home health care? Are they temporary? Are they high-skilled? No. Are they necessary? Absolutely. What are the legal numbers for these workers going forward? The choice will be a functioning U.S. economy, with a ready supply of legal labor, or a choked off and backward legal immigration system (like we have now), where the jobs are filled but by illegals … and we repeat the … cycle all over again.¶ The biggest immigration news of the weekend wasn’t the leak. It was what the leak exposed. And what the Senate working group, now on a tight deadline, will have to address with specificity, originality, and political deftness.¶ You read it here first. If immigration reform dies, it will not be because of disagreeable topics such as border security, legalization, or a “national ID card.”¶ It will be because of the agreeable topic of legal immigration.

#### DOD energy programs don’t link---conservative won’t oppose

Davenport 12

Coral Davenport, energy and environment correspondent for National Journal. Prior to joining National Journal in 2010, Davenport covered energy and environment for Politico, and before that, for Congressional Quarterly. In 2010, she was a fellow with the Metcalf Institute for Marine and Environmental Reporting. From 2001 to 2004, Davenport worked in Athens, Greece, as a correspondent for numerous publications, including the Christian Science Monitor and USA Today, covering politics, economics, international relations and terrorism in southeastern Europe. She also covered the 2004 Olympic Games in Athens, and was a contributing writer to the Fodor’s, Time Out, Eyewitness and Funseekers’ guidebook series. Davenport started her journalism career at the Daily Hampshire Gazette in Northampton, Massachusetts, after graduating from Smith College with a degree in English literature. National Journal, 2/10/12, White House Budget to Expand Clean-Energy Programs Through Pentagon, ProQuest

The White House believes it has figured out **how to get more money for clean-energy** programs touted by President Obama **without having it become political roadkill** in the wake of the Solyndra controversy: **Put it in the Pentagon**. While details are thin on the ground, **lawmakers who work on both energy- and defense-spending** policy **believe the fiscal 2013 budget** request to be delivered to Congress on Monday probably **won't include** big **increases** for wind and solar power **through the Energy Department, a** major target for Republicans since solar-panel maker Solyndra defaulted last year on a $535 million loan guarantee. But **they** do **expect to see increases in spending on alternative energy in** the **Defense** Department, such as programs to replace traditional jet fuel with biofuels, supply troops on the front lines with solar-powered electronic equipment, build hybrid-engine tanks and aircraft carriers, and increase renewable-energy use on military bases. **While Republicans will** instantly **shoot down requests for fresh spending on Energy Department programs that could be likened to** the one that funded **Solyndra**, **many support** **alternative-energy programs for the military**. "I do expect to see the spending," said Rep. Jack Kingston, R-Ga., a member of the House Defense Appropriations Subcommittee, when asked about increased investment in alternative-energy programs at the Pentagon. "I think in the past three to five years this has been going on, but that it has grown as a culture and a practice - and it's a good thing." "If Israel attacks Iran, and we have to go to war - and the Straits of Hormuz are closed for a week or a month and the price of fuel is going to be high," Kingston said, "the question is, in the military, what do you replace it with? It's not something you just do for the ozone. It's strategic." Sen. **Lindsey Graham**, R-S.C., who sits on both the Senate Armed Services Committee and the Defense Appropriations Subcommittee, **said, "I don't see what they're doing in DOD as being Solyndra**." "We're not talking about putting $500 million into a goofy idea," Graham told National Journal . "We're talking about taking applications of technologies that work and expanding them. I wouldn't be for DOD having a bunch of money to play around with renewable technologies that have no hope. But from what I understand, there are renewables out there that already work." A senior House Democrat noted that **this wouldn't be the first time** that **the Pentagon has been utilized to advance policies that wouldn't otherwise be supported**. "They did it in the '90s with medical research," said Rep. Henry Waxman, D-Calif., ranking member of the House Energy and Commerce Committee. In 1993, when funding was frozen for breast-cancer research programs in the National Institutes of Health, Congress boosted the Pentagon's budget for breast-cancer research - to more than double that of the health agency's funding in that area. **Politically, the strategy makes sense**. **Republicans are ready to fire at the first sign of any pet Obama program, and renewable programs at the Energy Department are an exceptionally ripe target**. That's because of Solyndra, but also because, in the last two years, the Energy Department received a massive $40 billion infusion in funding for clean-energy programs from the stimulus law, a signature Obama policy. When that money runs out this year, a request for more on top of it would be met with flat-out derision from most congressional Republicans. **Increasing renewable-energy initiatives at the Pentagon can** also **help Obama advance his** broader, national **goals** for transitioning the U.S. economy from fossil fuels to alternative sources. As the largest industrial consumer of energy in the world, the U.S. military can have a significant impact on energy markets - if it demands significant amounts of energy from alternative sources, it could help scale up production and ramp down prices for clean energy on the commercial market. Obama acknowledged those impacts in a speech last month at the Buckley Air Force Base in Colorado. "The Navy is going to purchase enough clean-energy capacity to power a quarter of a million homes a year. And it won't cost taxpayers a dime," Obama said. "What does it mean? It means that the world's largest consumer of energy - the Department of Defense - is making one of the largest commitments to clean energy in history," the president added. "That will grow this market, it will strengthen our energy security." Experts also hope that Pentagon engagement in clean-energy technology could help yield breakthroughs with commercial applications. Kingston acknowledged that the upfront costs for alternative fuels are higher than for conventional oil and gasoline. For example, the Air Force has pursued contracts to purchase biofuels made from algae and camelina, a grass-like plant, but those fuels can cost up to $150 a barrel, compared to oil, which is lately going for around $100 a barrel. Fuel-efficient hybrid tanks can cost $1 million more than conventional tanks - although in the long run they can help lessen the military's oil dependence, Kingston said Republicans recognize that the up-front cost can yield a payoff later. "It wouldn't be dead on arrival. But we'd need to see a two- to three-year payoff on the investment," Kingston said. Military officials - particularly Navy Secretary Ray Mabus, who has made alternative energy a cornerstone of his tenure - have been telling Congress for years that the military's dependence on fossil fuels puts the troops - and the nation's security - at risk. Mabus has focused on meeting an ambitious mandate from a 2007 law to supply 25 percent of the military's electricity from renewable power sources by 2025. (Obama has tried and failed to pass a similar national mandate.) Last June, the **DOD rolled out its first department-wide energy policy to coalesce alternative and energy-efficient initiatives across the military services**. In January, the department announced that a study of military installations in the western United States found four California desert bases suitable to produce enough solar energy - 7,000 megawatts - to match seven nuclear power plants. And so far, those **moves have met with approval from congressional Republicans**. Even so, any request for new Pentagon spending will be met with greater scrutiny this year. The Pentagon's budget is already under a microscope, due to $500 billion in automatic cuts to defense spending slated to take effect in 2013. But **even with** those **challenges**, **clean-energy spending** probably **won't stand out** as much **in** the **military budget as it would in the Energy Department budget**. Despite its name, the Energy Department has traditionally had little to do with energy policy - its chief portfolio is maintaining the nation's nuclear weapons arsenal. Without the stimulus money, last year only $1.9 billion of Energy's $32 billion budget went to clean-energy programs. A spending increase of just $1 billion would make a big difference in the agency's bottom line. But **it would** probably **be easier to tuck another** $1 billion or $**2 billion** **on clean-energy spending into the Pentagon's $518 billion budget**. **Last year**, **the Pentagon spent** about $**1 billion on renewable energy** and energy-efficiency programs across its departments.

#### 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

# Round 6 v UTSA NS

### Plan

**The United States federal government should obtain, through alternative financing, electricity from small modular reactors for 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 U**nited **S**tates **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 U**nited **S**tates **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 U**nited **S**tates 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 U**nited **S**tates, **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 executedthese 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.\

#### SMRs solve – makes bases resilient and deters attacks – alternatives fail

Andres and Breetz 11

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Small Reactors and Energy Security¶ The DOD interest in small reactors derives largely from problems with base and logistics vulnerability. Over the last few years, the Services have begun to reexamine virtually every aspect of how they generate and use energy with an eye toward cutting costs, decreasing carbon emissions, and reducing energy-related vulnerabilities. These actions have resulted in programs that have significantly reduced DOD energy consumption and greenhouse gas emissions at domestic bases. Despite strong efforts, however, two critical security issues have thus far **proven resistant to existing solutions**: bases’ vulnerability to civilian power outages, and the need to transport large quantities of fuel via convoys through hostile territory to forward locations. Each of these is explored below.¶ 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 the vast 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 attacks take out C and C – causes relation and nuclear war**

**Tilford 12**

Robert, Graduate US Army Airborne School, Ft. Benning, Georgia, “Cyber attackers could shut down the electric grid for the entire east coast” 2012, <http://www.examiner.com/article/cyber-attackers-could-easily-shut-down-the-electric-grid-for-the-entire-east-coa>

To make matters worse **a cyber attack that can take out a civilian power grid, for example could also cripple the U.S. military.**¶ The senator notes that is that the same power grids that supply cities and towns, stores and gas stations, cell towers and heart monitors also power “every military base in our country.”¶ “Although bases would be prepared to weather a short power outage with **backup diesel generators, within hours, not days, fuel supplies would run out”**, he said.¶ Which means military **command and control centers could go dark**.¶ **Radar systems that detect air threats** to our country **would shut Down completely**.¶ “**Communication between commanders and their troops would also go silent. And many weapons systems would be left without either fuel or electric power”,** said Senator Grassley.¶ “**So in a few short hours or days, the mightiest military in the world would be left scrambling to maintain base functions**”, he said.¶ We contacted the Pentagon and officials confirmed the threat of a cyber attack is something very real.¶ Top national security officials—including the Chairman of the Joint Chiefs, the Director of the National Security Agency, **the Secretary of Defense, and the CIA Director— have said, “preventing a cyber attack and improving the nation’s electric grids is among the most urgent priorities of our country”** (source: Congressional Record).¶ So how serious is the Pentagon taking all this?¶ Enough to start, or end a war over it, for sure (see video: Pentagon declares war on cyber attacks http://www.youtube.com/watch?v=\_kVQrp\_D0kY&feature=relmfu ).¶ **A cyber attack today against the US could very well be seen as an “Act of War” and could be met with a “full scale” US military response.**¶ That could include the use **of “nuclear weapons**”, if authorized by the President.

**Grid failure wrecks US critical mission operations**

**Stockton 11** Paul, assistant secretary of defense for Homeland Defense and Americas’ Security Affairs, “Ten Years After 9/11: Challenges for the Decade to Come”, <http://www.hsaj.org/?fullarticle=7.2.11>

The cyber threat to the DIB is only part of a much larger challenge to DoD. Potential adversaries are seeking asymmetric means to cripple our force projection, warfighting, and sustainment capabilities, by targeting the critical civilian and defense supporting assets (within the United States and abroad) on which our forces depend. This challenge is not limited to man-made threats; DoD must also execute its mission-essential functions in the face of disruptions caused by naturally occurring hazards.20 Threats and hazards to DoD mission execution include incidents such as earthquakes, naturally occurring pandemics, solar weather events, and industrial accidents, as well as kinetic or virtual attacks by state or non-state actors. Threats can also emanate from insiders with ties to foreign counterintelligence organizations, homegrown terrorists, or individuals with a malicious agenda. From a DoD perspective, this global convergence of unprecedented threats and hazards, and vulnerabilities and consequences, is a particularly problematic reality of the post-Cold War world. Successfully deploying and sustaining our military forces are increasingly a function of interdependent supply chains and privately owned infrastructure within the United States and abroad, including transportation networks, cyber systems, commercial corridors, communications pathways, and energy grids. This infrastructure largely falls outside DoD direct control. Adversary actions to destroy, disrupt, or manipulate this highly vulnerable homeland- and foreign-based infrastructure may be relatively easy to achieve and extremely tough to counter. Attacking such “soft,” diffuse infrastructure systems could significantly affect our military forces globally – potentially blinding them, neutering their command and control, degrading their mobility, and isolating them from their principal sources of logistics support. The Defense Critical Infrastructure Program (DCIP) under Mission Assurance seeks to improve execution of DoD assigned missions to make them more resilient. This is accomplished through the assessment of the supporting commercial infrastructure relied upon by key nodes during execution. By building resilience into the system and ensuring this support is well maintained, DoD aims to ensure it can "take a punch as well as deliver one."21 It also provides the department the means to prioritize investments across all DoD components and assigned missions to the most critical issues faced by the department through the use of risk decision packages (RDP).22 The commercial power supply on which DoD depends exemplifies both the novel challenges we face and the great progress we are making with other federal agencies and the private sector. Today’s commercial electric power grid has a great deal of resilience against the sort of disruptive events that have traditionally been factored into the grid’s design. Yet, the grid will increasingly confront threats beyond that traditional design basis. This complex risk environment includes: disruptive or deliberate attacks, either physical or cyber in nature; severe natural hazards such as geomagnetic storms and natural disasters with cascading regional and national impacts (as in NLE 11); long supply chain lead times for key replacement electric power equipment; transition to automated control systems and other smart grid technologies without robust security; and more frequent interruptions in fuel supplies to electricity-generating plants. These risks are magnified by globalization, urbanization, and the highly interconnected nature of people, economies, information, and infrastructure systems. The department is highly dependent on commercial power grids and energy sources. As the largest consumer of energy in the United States, DoD is dependent on commercial electricity sources outside its ownership and control for secure, uninterrupted power to support critical missions. In fact, approximately 99 percent of the electricity consumed by DoD facilities originates offsite, while approximately 85 percent of critical electricity infrastructure itself is commercially owned. This situation only underscores the importance of our partnership with DHS and its work to protect the nation’s critical infrastructure – a mission that serves not only the national defense but also the larger national purpose of sustaining our economic health and competitiveness. DoD has traditionally assumed that the commercial grid will be subject only to infrequent, weather-related, and short-term disruptions, and that available backup power is sufficient to meet critical mission needs. As noted in the February 2008 Report of the Defense Science Board Task Force on DoD Energy Strategy, “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.”23 Similarly, a 2009 GAO Report on Actions Needed to Improve the Identification and Management of Electrical Power Risks and Vulnerabilities to DoD Critical Assets stated that DoD mission-critical assets rely primarily on commercial electric power and are vulnerable to disruptions in electric power supplies.24 Moreover, these vulnerabilities may cascade into other critical infrastructure that uses the grid – communications, water, transportation, and pipelines – that, in turn, is needed for the normal operation of the grid, as well as its quick recovery in emergency situations. To remedy this situation, the Defense Science Board (DSB) Task Force recommended that DoD take a broad-based approach, including a focused analysis of critical functions and supporting assets, a more realistic assessment of electricity outage cause and duration, and an integrated approach to risk management that includes greater efficiency, renewable resources, distributed generation, and increased reliability. DoD Mission Assurance is designed to carry forward the DSB recommendations. Yet, for a variety of reasons – technical, financial, regulatory, and legal – DoD has limited ability to manage electrical power demand and supply on its installations. As noted above, DHS is the lead agency for critical infrastructure protection by law and pursuant to Homeland Security Presidential Directive 7. The Department of Energy (DOE) is the lead agency on energy matters. And within DoD, energy and energy security roles and responsibilities are distributed and shared, with different entities managing security against physical, nuclear, and cyber threats; cost and regulatory compliance; and the response to natural disasters. And of course, production and delivery of electric power to most DoD installations are controlled by commercial entities that are regulated by state and local utility commissions. The resulting paradox: DoD is dependent on a commercial power system over which it does not – and never will – exercise control.

**Loss of mission effectiveness causes nuclear war in every hotspot**

**Kagan and O’Hanlon 7** Frederick, resident scholar at AEI and Michael, senior fellow in foreign policy at Brookings, “The Case for Larger Ground Forces”, April 2007, http://www.aei.org/files/2007/04/24/20070424\_Kagan20070424.pdf

We live at a time when wars not only rage in nearly every region but threaten to erupt in many places where the current relative calm is tenuous. To view this as a strategic military challenge for the United States is not to espouse a specific theory of America’s role in the world or a certain political philosophy. Such an assessment flows directly from the basic bipartisan view of American foreign policy makers since World War II that overseas threats must be countered before they can directly threaten this country’s shores, that the basic stability of the international system is essential to American peace and prosperity, and that no country besides the United States is in a position to lead the way in countering major challenges to the global order. Let us highlight the threats and their consequences with a few concrete examples, emphasizing those that involve key strategic regions of the world such as the Persian Gulf and East Asia, or key potential threats to American security, such as the spread of nuclear weapons and the strengthening of the global Al Qaeda/jihadist movement. The Iranian government has rejected a series of international demands to halt its efforts at enriching uranium and submit to international inspections. What will happen if the US—or Israeli—government becomes convinced that Tehran is on the verge of fielding a nuclear weapon? North Korea, of course, has already done so, and the ripple effects are beginning to spread. Japan’s recent election to supreme power of a leader who has promised to rewrite that country’s constitution to support increased armed forces—and, possibly, even nuclear weapons— may well alter the delicate balance of fear in Northeast Asia fundamentally and rapidly. Also, in the background, at least for now, Sino Taiwanese tensions continue to flare, as do tensions between India and Pakistan, Pakistan and Afghanistan, Venezuela and the United States, and so on. Meanwhile, the world’s nonintervention in Darfur troubles consciences from Europe to America’s Bible Belt to its bastions of liberalism, yet with no serious international forces on offer, the bloodletting will probably, tragically, continue unabated. And as bad as things are in Iraq today, they could get worse. What would happen if the key Shiite figure, Ali al Sistani, were to die? If another major attack on the scale of the Golden Mosque bombing hit either side (or, perhaps, both sides at the same time)? Such deterioration might convince many Americans that the war there truly was lost—but the costs of reaching such a conclusion would be enormous. Afghanistan is somewhat more stable for the moment, although a major Taliban offensive appears to be in the offing. Sound US grand strategy must proceed from the recognition that, over the next few years and decades, the world is going to be a very unsettled and quite dangerous place, with Al Qaeda and its associated groups as a subset of a much larger set of worries. The only serious response to this international environment is to develop armed forces capable of protecting America’s vital interests throughout this dangerous time**. Doing so requires a military capable of a wide range of missions**—including not only deterrence of great power conflict in dealing with potential hotspots in Korea, the Taiwan Strait, and the Persian Gulf but also associated with a variety of Special Forces activities and stabilization operations. For today’s US military, which already excels at high technology and is increasingly focused on re-learning the lost art of counterinsurgency, this is first and foremost a question of finding the resources to field a large-enough standing Army and Marine Corps to handle personnel intensive missions such as the ones now under way in Iraq and Afghanistan. Let us hope there will be no such large-scale missions for a while. But preparing for the possibility, while doing whatever we can at this late hour to relieve the pressure on our soldiers and **Marines** in ongoing operations, is prudent. At worst, the only potential downside to a major program to strengthen the military is the possibility of spending a bit too much money. **Recent history shows no link between having a larger military and its overuse**; indeed, Ronald Reagan’s time in office was characterized by higher defense budgets and yet much less use of the military, an outcome for which we can hope in the coming years, but hardly guarantee. While the authors disagree between ourselves about proper increases in the size and cost of the military (with O’Hanlon preferring to hold defense to roughly 4 percent of GDP and seeing ground forces increase by a total of perhaps 100,000, and Kagan willing to devote at least 5 percent of GDP to defense as in the Reagan years and increase the Army by at least 250,000), we agree on the need to start expanding ground force capabilities by at least 25,000 a year immediately. Such a measure is not only prudent, it is also badly overdue.

#### Hegemony key to global peace and solving great power wars

Barnett 11

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It is worth first examining the larger picture: **We live in a time of arguably the greatest structural change in the global order yet endured**, **with this historical moment's most amazing feature being its** relative and absolute **lack of mass violence**. That is something to consider when Americans contemplate military intervention in Libya, because if we do take the step to prevent larger-scale killing by engaging in some killing of our own, we will not be adding to some fantastically imagined global death count stemming from the ongoing "megalomania" and "evil" of American "empire." We'll be engaging in the same sort of system-administering activity that has marked our **stunningly successful stewardship of global order** since World War II. Let me be more blunt: **As the guardian of globalization**, **the U.S. military has been the greatest force for peace the world has ever known**. Had America been removed from the global dynamics that governed the 20th century, the mass murder never would have ended. Indeed, it's entirely conceivable there would now be no identifiable human civilization left, once nuclear weapons entered the killing equation**.**  But **the world did not keep sliding down that path of perpetual war**. **Instead, America stepped up and changed everything by ushering in our now-perpetual great-power peace**. **We introduced the international liberal trade order known as globalization** and played loyal Leviathan over its spread. **What resulted was the collapse of empires, an explosion of democracy**, the **persistent spread of human rights**, the liberation of women, **the doubling of life expectancy**, a roughly **10-fold increase in adjusted global GDP** **and a profound and persistent reduction in battle deaths from state-based conflicts.** That is what American "hubris" actually delivered. Please remember that the next time some TV pundit sells you the image of "unbridled" American military power as the cause of global disorder instead of its cure. With self-deprecation bordering on self-loathing, we now imagine a post-American world that is anything but. Just watch who scatters and who steps up as the Facebook revolutions erupt across the Arab world. While we might imagine ourselves the status quo power, we remain the world's most vigorously revisionist force.

As for the sheer "evil" that is our military-industrial complex, again, let's examine what the world looked like before that establishment reared its ugly head. **The last great period of global structural change was the first half of the 20th century, a period that saw a death toll of about 100 million across two world wars.** That comes to an average of 2 million deaths a year in a world of approximately 2 billion souls. Today, with far more comprehensive worldwide reporting, researchers report an average of less than 100,000 battle deaths annually in a world fast approaching 7 billion people. Though admittedly crude**, these calculations suggest a 90 percent absolute drop and a 99 percent relative drop in deaths due to war. We are clearly headed for a world order characterized by multipolarity,** something the American-birthed system was designed to both encourage and accommodate. **But given how things turned out the last time we collectively faced such a fluid structure, we would do well to keep U.S. power, in all of its forms, deeply embedded in the geometry to come.**

To continue the historical survey, after salvaging Western Europe from its half-century of civil war, **the U.S. emerged as the progenitor of a new, far more just form of globalization -- one based on actual free trade rather than colonialism.** America then successfully replicated globalization further in East Asia over the second half of the 20th century, **setting the stage for the Pacific Century now unfolding.**

#### American hegemony key to relative peace.

Kagan 12

(Mr. Kagan is a senior fellow in foreign policy at the Brookings Institution, “Why the World Needs America” <http://online.wsj.com/article/SB10001424052970203646004577213262856669448.html#printMode>, SEH)

History shows that world orders, including our own, are transient. They rise and fall, and the institutions they erect, the beliefs and "norms" that guide them, the economic systems they support—they rise and fall, too. The downfall of the Roman Empire brought an end not just to Roman rule but to Roman government and law and to an entire economic system stretching from Northern Europe to North Africa. Culture, the arts, even progress in science and technology, were set back for centuries. Modern history has followed a similar pattern. After the Napoleonic Wars of the early 19th century, British control of the seas and the balance of great powers on the European continent provided relative security and stability. Prosperity grew, personal freedoms expanded, and the world was knit more closely together by revolutions in commerce and communication.¶ With the outbreak of World War I, the age of settled peace and advancing liberalism—of European civilization approaching its pinnacle—collapsed into an age of hyper-nationalism, despotism and economic calamity. The once-promising spread of democracy and liberalism halted and then reversed course, leaving a handful of outnumbered and besieged democracies living nervously in the shadow of fascist and totalitarian neighbors. The collapse of the British and European orders in the 20th century did not produce a new dark age—though if Nazi Germany and imperial Japan had prevailed, it might have—but the horrific conflict that it produced was, in its own way, just as devastating.¶ Would the end of the present American-dominated order have less dire consequences? A surprising number of American intellectuals, politicians and policy makers greet the prospect with equanimity. There is a general sense that the end of the era of American pre-eminence, if and when it comes, need not mean the end of the present international order, with its widespread freedom, unprecedented global prosperity (even amid the current economic crisis) and absence of war among the great powers.¶ American power may diminish, the political scientist G. John Ikenberry argues, but "the underlying foundations of the liberal international order will survive and thrive." The commentator Fareed Zakaria believes that even as the balance shifts against the U.S., rising powers like China "will continue to live within the framework of the current international system." And there are elements across the political spectrum—Republicans who call for retrenchment, Democrats who put their faith in international law and institutions—who don't imagine that a "post-American world" would look very different from the American world.¶ If all of this sounds too good to be true, it is. The present world order was largely shaped by American power and reflects American interests and preferences. If the balance of power shifts in the direction of other nations, the world order will change to suit their interests and preferences. Nor can we assume that all the great powers in a post-American world would agree on the benefits of preserving the present order, or have the capacity to preserve it, even if they wanted to.¶ Take the issue of democracy. For several decades, the balance of power in the world has favored democratic governments. In a genuinely post-American world, the balance would shift toward the great-power autocracies. Both Beijing and Moscow already protect dictators like Syria's Bashar al-Assad. If they gain greater relative influence in the future, we will see fewer democratic transitions and more autocrats hanging on to power. The balance in a new, multipolar world might be more favorable to democracy if some of the rising democracies—Brazil, India, Turkey, South Africa—picked up the slack from a declining U.S. Yet not all of them have the desire or the capacity to do it.¶ What about the economic order of free markets and free trade? People assume that China and other rising powers that have benefited so much from the present system would have a stake in preserving it. They wouldn't kill the goose that lays the golden eggs.¶ Unfortunately, they might not be able to help themselves. The creation and survival of a liberal economic order has depended, historically, on great powers that are both willing and able to support open trade and free markets, often with naval power. If a declining America is unable to maintain its long-standing hegemony on the high seas, would other nations take on the burdens and the expense of sustaining navies to fill in the gaps?¶ Even if they did, would this produce an open global commons—or rising tension? China and India are building bigger navies, but the result so far has been greater competition, not greater security. As Mohan Malik has noted in this newspaper, their "maritime rivalry could spill into the open in a decade or two," when India deploys an aircraft carrier in the Pacific Ocean and China deploys one in the Indian Ocean. The move from American-dominated oceans to collective policing by several great powers could be a recipe for competition and conflict rather than for a liberal economic order.¶ And do the Chinese really value an open economic system? The Chinese economy soon may become the largest in the world, but it will be far from the richest. Its size is a product of the country's enormous population, but in per capita terms, China remains relatively poor. The U.S., Germany and Japan have a per capita GDP of over $40,000. China's is a little over $4,000, putting it at the same level as Angola, Algeria and Belize. Even if optimistic forecasts are correct, China's per capita GDP by 2030 would still only be half that of the U.S., putting it roughly where Slovenia and Greece are today.¶ As Arvind Subramanian and other economists have pointed out, this will make for a historically unique situation. In the past, the largest and most dominant economies in the world have also been the richest. Nations whose peoples are such obvious winners in a relatively unfettered economic system have less temptation to pursue protectionist measures and have more of an incentive to keep the system open.¶ China's leaders, presiding over a poorer and still developing country, may prove less willing to open their economy. They have already begun closing some sectors to foreign competition and are likely to close others in the future. Even optimists like Mr. Subramanian believe that the liberal economic order will require "some insurance" against a scenario in which "China exercises its dominance by either reversing its previous policies or failing to open areas of the economy that are now highly protected." American economic dominance has been welcomed by much of the world because, like the mobster Hyman Roth in "The Godfather," the U.S. has always made money for its partners. Chinese economic dominance may get a different reception.¶ Another problem is that China's form of capitalism is heavily dominated by the state, with the ultimate goal of preserving the rule of the Communist Party. Unlike the eras of British and American pre-eminence, when the leading economic powers were dominated largely by private individuals or companies, China's system is more like the mercantilist arrangements of previous centuries. The government amasses wealth in order to secure its continued rule and to pay for armies and navies to compete with other great powers.¶ Although the Chinese have been beneficiaries of an open international economic order, they could end up undermining it simply because, as an autocratic society, their priority is to preserve the state's control of wealth and the power that it brings. They might kill the goose that lays the golden eggs because they can't figure out how to keep both it and themselves alive.¶ Finally, what about the long peace that has held among the great powers for the better part of six decades? Would it survive in a post-American world?¶ Most commentators who welcome this scenario imagine that American predominance would be replaced by some kind of multipolar harmony. But multipolar systems have historically been neither particularly stable nor particularly peaceful. Rough parity among powerful nations is a source of uncertainty that leads to miscalculation. Conflicts erupt as a result of fluctuations in the delicate power equation.¶ War among the great powers was a common, if not constant, occurrence in the long periods of multipolarity from the 16th to the 18th centuries, culminating in the series of enormously destructive Europe-wide wars that followed the French Revolution and ended with Napoleon's defeat in 1815.¶ The 19th century was notable for two stretches of great-power peace of roughly four decades each, punctuated by major conflicts. The Crimean War (1853-1856) was a mini-world war involving well over a million Russian, French, British and Turkish troops, as well as forces from nine other nations; it produced almost a half-million dead combatants and many more wounded. In the Franco-Prussian War (1870-1871), the two nations together fielded close to two million troops, of whom nearly a half-million were killed or wounded.¶ The peace that followed these conflicts was characterized by increasing tension and competition, numerous war scares and massive increases in armaments on both land and sea. Its climax was World War I, the most destructive and deadly conflict that mankind had known up to that point. As the political scientist Robert W. Tucker has observed, "Such stability and moderation as the balance brought rested ultimately on the threat or use of force. War remained the essential means for maintaining the balance of power."¶ There is little reason to believe that a return to multipolarity in the 21st century would bring greater peace and stability than it has in the past. The era of American predominance has shown that there is no better recipe for great-power peace than certainty about who holds the upper hand.¶ President Bill Clinton left office believing that the key task for America was to "create the world we would like to live in when we are no longer the world's only superpower," to prepare for "a time when we would have to share the stage." It is an eminently sensible-sounding proposal. But can it be done? For particularly in matters of security, the rules and institutions of international order rarely survive the decline of the nations that erected them. They are like scaffolding around a building: They don't hold the building up; the building holds them up.¶ Many foreign-policy experts see the present international order as the inevitable result of human progress, a combination of advancing science and technology, an increasingly global economy, strengthening international institutions, evolving "norms" of international behavior and the gradual but inevitable triumph of liberal democracy over other forms of government—forces of change that transcend the actions of men and nations.¶ Americans certainly like to believe that our preferred order survives because it is right and just—not only for us but for everyone. We assume that the triumph of democracy is the triumph of a better idea, and the victory of market capitalism is the victory of a better system, and that both are irreversible. That is why Francis Fukuyama's thesis about "the end of history" was so attractive at the end of the Cold War and retains its appeal even now, after it has been discredited by events. The idea of inevitable evolution means that there is no requirement to impose a decent order. It will merely happen.¶ But international order is not an evolution; it is an imposition. It is the domination of one vision over others—in America's case, the domination of free-market and democratic principles, together with an international system that supports them. The present order will last only as long as those who favor it and benefit from it retain the will and capacity to defend it.¶ There was nothing inevitable about the world that was created after World War II. No divine providence or unfolding Hegelian dialectic required the triumph of democracy and capitalism, and there is no guarantee that their success will outlast the powerful nations that have fought for them. Democratic progress and liberal economics have been and can be reversed and undone. The ancient democracies of Greece and the republics of Rome and Venice all fell to more powerful forces or through their own failings. The evolving liberal economic order of Europe collapsed in the 1920s and 1930s. The better idea doesn't have to win just because it is a better idea. It requires great powers to champion it.¶ If and when American power declines, the institutions and norms that American power has supported will decline, too. Or more likely, if history is a guide, they may collapse altogether as we make a transition to another kind of world order, or to disorder. We may discover then that the U.S. was essential to keeping the present world order together and that the alternative to American power was not peace and harmony but chaos and catastrophe—which is what the world looked like right before the American order came into being.

**ONLY EMPIRICISM CAN EXPLAIN THE OBJECTIVE FACTS OF RELATIVE PEACE AND HEGEMONY.**

**Wohlforth 8—**Daniel Webster Professor of Government, Dartmouth. BA in IR, MA in IR and MPhil and PhD in pol sci, Yale (William, Unipolarity, Status Competition, and Great Power War, October 2008, World Politics Vol. 61, Iss. 1; pg. 28, 31 pgs, Proquest)

Despite increasingly compelling findings concerning the importance of status seeking in human behavior, research on its connection to war waned some three decades ago.38 Yet empirical studies of the relationship between both systemic and dyadic capabilities distributions and war have continued to cumulate. If the relationships implied by the status theory run afoul of well-established patterns or general historical findings, then there is little reason to continue investigating them. **The clearest empirical implication** of the theory **is that** status **competition is unlikely to cause great power military conflict in unipolar systems**. If status competition is an important contributory cause of great power war, then, ceteris paribus, unipolar systems should be markedly less war-prone than bipolar or multipolar systems. And this appears to be the case. As Daniel Geller notes in a review of the empirical literature: "**The only polar structure that appears to influence conflict probability is unipolarity**."39 In addition, a larger number of studies at the dyadic level support the related expectation that narrow capabilities gaps and ambiguous or unstable capabilities hierarchies increase the probability of war.40 These studies are based entirely on post-sixteenth-century European history, and most are limited to the post-1815 period covered by the standard data sets. Though the systems coded as unipolar, near-unipolar, and hegemonic are all marked by a high concentration of capabilities in a single state, these studies operationalize unipolarity in a variety of ways, often very differently from the definition adopted here. An ongoing collaborative project looking at ancient interstate systems over the course of two thousand years suggests that historical systems that come closest to the definition of unipolarity used here exhibit precisely the behavioral properties implied by the theory. 41 As David C. Kang's research shows, the East Asian system between 1300 and 1900 was an unusually stratified unipolar structure, with an economic and militarily dominant China interacting with a small number of geographically proximate, clearly weaker East Asian states.42 Status politics existed, but actors were channeled by elaborate cultural understandings and interstate practices into clearly recognized ranks. Warfare was exceedingly rare, and the major outbreaks occurred precisely when the theory would predict: when China's capabilities waned, reducing the clarity of the underlying material hierarchy and increasing status dissonance for lesser powers. Much more research is needed, but initial exploration of other arguably unipolar systems-for example, Rome, Assyria, the Amarna system-appears consistent with the hypothesis.43 Status Competition and Causal Mechanisms Both theory and evidence demonstrate convincingly that competition for status is a driver of human behavior, and social identity theory and related literatures suggest the conditions under which it might come to the fore in great power relations. Both the systemic and dyadic findings presented in large-N studies are broadly consistent with the theory, but they are also consistent with power transition and other rationalist theories of hegemonic war.

#### War is at its lowest level in history because of US primacy---best statistical studies prove

Owen 11

John M. Owen Professor of Politics at University of Virginia PhD from Harvard "DON’T DISCOUNT HEGEMONY" Feb 11 www.cato-unbound.org/2011/02/11/john-owen/dont-discount-hegemony/

Andrew Mack and his colleagues at the Human Security Report Project are to be congratulated. Not only do they present a study with a striking conclusion, driven by data, free of theoretical or ideological bias, but they also do something quite unfashionable: they bear good news. Social scientists really are not supposed to do that. Our job is, if not to be Malthusians, then at least to point out disturbing trends, looming catastrophes, and the imbecility and mendacity of policy makers. And then it is to say why, if people listen to us, things will get better. We do this as if our careers depended upon it, and perhaps they do; for if all is going to be well, what need then for us?

Our colleagues at Simon Fraser University are brave indeed. That may sound like a setup, but it is not. I shall challenge neither the data nor the general conclusion that violent conflict around the world has been decreasing in fits and starts since the Second World War. When it comes to violent conflict among and within countries, **things have been getting better**. (The trends have not been linear—Figure 1.1 actually shows that the frequency of interstate wars peaked in the 1980s—but the 65-year movement is clear.) Instead I shall accept that Mack et al. are correct on the macro-trends, and focus on their explanations they advance for these remarkable trends. With apologies to any readers of this forum who recoil from academic debates, this might get mildly theoretical and even more mildly methodological.

Concerning international wars, one version of the “nuclear-peace” theory is not in fact laid to rest by the data. It is certainly true that nuclear-armed states have been involved in many wars. They have even been attacked (think of Israel), which falsifies the simple claim of “assured destruction”—that any nuclear country A will deter any kind of attack by any country B because B fears a retaliatory nuclear strike from A.

But the most important “nuclear-peace” claim has been about mutually assured destruction, which obtains between two robustly nuclear-armed states. The claim is that (1) rational states having second-strike capabilities—enough deliverable nuclear weaponry to survive a nuclear first strike by an enemy—will have an overwhelming incentive not to attack one another; and (2) we can safely assume that nuclear-armed states are rational. It follows that states with a second-strike capability will not fight one another.

Their colossal atomic arsenals neither kept the United States at peace with North Vietnam during the Cold War nor the Soviet Union at peace with Afghanistan. But the argument remains strong that those arsenals did help keep the United States and Soviet Union at peace with each other. Why non-nuclear states are not deterred from fighting nuclear states is an important and open question. But in a time when calls to ban the Bomb are being heard from more and more quarters, we must be clear about precisely what the broad trends toward peace can and cannot tell us. They may tell us nothing about why we have had no World War III, and little about the wisdom of banning the Bomb now.

Regarding the **downward trend in international war**, Professor Mack is friendlier to more palatable theories such as the “**democratic peace**” (democracies do not fight one another, and the proportion of democracies has increased, hence less war); the interdependence or “**commercial peace**” (states with extensive economic ties find it irrational to fight one another, and interdependence has increased, hence less war); and the notion that people around the world are more anti-war than their forebears were. Concerning the downward trend in civil wars, he favors theories of economic growth (where commerce is enriching enough people, violence is less appealing—a logic similar to that of the “commercial peace” thesis that applies among nations) and the end of the Cold War (which end reduced superpower support for rival rebel factions in so many Third-World countries).

These are all **plausible mechanisms for peace**. What is more, none of them excludes any other; all could be working toward the same end. That would be somewhat puzzling, however. Is the world just lucky these days? How is it that an array of peace-inducing factors happens to be working coincidentally in our time, when such a magical array was absent in the past? The answer may be that one or more of these mechanisms reinforces some of the others, or perhaps some of them are mutually reinforcing. Some scholars, for example, have been focusing on whether economic growth might support democracy and vice versa, and whether both might support international cooperation, including to end civil wars.

We would still need to explain how this charmed circle of causes got started, however. And here let me raise another factor, perhaps even less appealing than the “nuclear peace” thesis, at least outside of the United States. That factor is what international relations scholars call hegemony—specifically **American hegemony**.

A theory that many regard as discredited, but that refuses to go away, is called hegemonic stability theory. The theory emerged in the 1970s in the realm of international political economy. It asserts that **for the global economy to remain open**—for countries to keep barriers to trade and investment low—**one powerful country must take the lead**. Depending on the theorist we consult, “taking the lead” entails paying for global public goods (keeping the sea lanes open, providing liquidity to the international economy), coercion (threatening to raise trade barriers or withdraw military protection from countries that cheat on the rules), or both. The theory is skeptical that international cooperation in economic matters can emerge or endure absent a hegemon. The distastefulness of such claims is self-evident: they imply that it is good for everyone the world over if one country has more wealth and power than others. More precisely, they imply that it has been good for the world that the United States has been so predominant.

There is no obvious reason why hegemonic stability theory could not apply to other areas of international cooperation, including in security affairs, human rights, international law, peacekeeping (UN or otherwise), and so on. What I want to suggest here—suggest, not test—is that **American hegemony might just be a deep cause of the steady decline of political deaths in the world**.

How could that be? After all, the report states that United States is the third most war-prone country since 1945. Many of the deaths depicted in Figure 10.4 were in wars that involved the United States (the Vietnam War being the leading one). Notwithstanding politicians’ claims to the contrary, a candid look at U.S. foreign policy reveals that the country is as ruthlessly self-interested as any other great power in history.

The answer is that U.S. hegemony might just be a **deeper cause of the proximate causes** outlined by Professor Mack. Consider economic growth and openness to foreign trade and investment, which (so say some theories) **render violence irrational**. American power and policies may be responsible for these in two related ways. First, at least since the 1940s Washington has **prodded other countries to embrace the market capitalism** that entails economic openness and produces **sustainable economic growth**. The United States promotes capitalism for selfish reasons, of course: its own domestic system depends upon growth, which in turn depends upon the efficiency gains from economic interaction with foreign countries, and the more the better. During the Cold War most of its allies accepted some degree of market-driven growth.

Second, the U.S.-led western victory in the Cold War damaged the credibility of alternative paths to development—communism and import-substituting industrialization being the two leading ones—and **left market capitalism the best model**. The end of the Cold War also involved an end to the billions of rubles in Soviet material support for regimes that tried to make these alternative models work. (It also, as Professor Mack notes, **eliminated the superpowers’ incentives to feed civil violence** in the Third World.) What we call **globalization** is **caused in part by the emergence of the United States as the global hegemon**.

The same case can be made, with somewhat more difficulty, concerning the **spread of democracy**. Washington has supported democracy only under certain conditions—the chief one being the absence of a popular anti-American movement in the target state—but those conditions have become much more widespread following the collapse of communism. Thus in the 1980s the Reagan administration—the most anti-communist government America ever had—began to dump America’s old dictator friends, starting in the Philippines. Today Islamists tend to be anti-American, and so the Obama administration is skittish about democracy in Egypt and other authoritarian Muslim countries. But general U.S. material and moral support for liberal democracy remains strong.

#### And, the most universal empirical data confirms our conclusion.

Pinker 11

Steven Pinker is Professor of psychology at Harvard University "Violence Vanquished" Sept 24 online.wsj.com/article/SB10001424053111904106704576583203589408180.html

On the day this article appears, you will read about a shocking act of violence. Somewhere in the world there will be a terrorist bombing, a senseless murder, a bloody insurrection. It's impossible to learn about these catastrophes without thinking, "What is the world coming to?"

But a better question may be, "How bad was the world in the past?"

Believe it or not, **the world of the past was much worse**. **Violence has been in decline** for **thousands of years,** and today we may be living in the **most peaceable era** in the existence of our species.

The decline, to be sure, has not been smooth. It **has not brought violence down to zero**, and it **is not guaranteed to continue**. But it is a persistent historical development, visible on scales from millennia to years, from the waging of wars to the spanking of children.

This claim, I know, invites skepticism, incredulity, and sometimes anger. We tend to estimate the probability of an event from the ease with which we can recall examples, and scenes of carnage are more likely to be beamed into our homes and burned into our memories than footage of people dying of old age. There will always be enough violent deaths to fill the evening news, so people's impressions of violence will be disconnected from its actual likelihood.

Evidence of our bloody history is not hard to find. Consider the genocides in the Old Testament and the crucifixions in the New, the gory mutilations in Shakespeare's tragedies and Grimm's fairy tales, the British monarchs who beheaded their relatives and the American founders who dueled with their rivals.

Today the decline in these brutal practices **can be quantified**. A look at the numbers shows that over the course of our history, humankind has been blessed with **six major declines of violence.**

The first was a process of pacification: the transition from the anarchy of the hunting, gathering and horticultural societies in which our species spent most of its evolutionary history to the first agricultural civilizations, with cities and governments, starting about 5,000 years ago.

For centuries, social theorists like Hobbes and Rousseau speculated from their armchairs about what life was like in a "state of nature." Nowadays we can do better. Forensic archeology—a kind of "CSI: Paleolithic"—can estimate rates of violence from the proportion of skeletons in ancient sites with bashed-in skulls, decapitations or arrowheads embedded in bones. And ethnographers can tally the causes of death in tribal peoples that have recently lived outside of state control.

These investigations show that, on average, about 15% of people in prestate eras died violently, compared to about 3% of the citizens of the earliest states. Tribal violence commonly subsides when a **state or empire imposes control over a territory, leading to the various "paxes**" (Romana, Islamica, Brittanica and so on) that are familiar to readers of history.

It's not that the first kings had a benevolent interest in the welfare of their citizens. Just as a farmer tries to prevent his livestock from killing one another, so a ruler will try to keep his subjects from cycles of raiding and feuding. From his point of view, such squabbling is a dead loss—forgone opportunities to extract taxes, tributes, soldiers and slaves.

The second decline of violence was a civilizing process that is best documented in Europe. Historical records show that between the late Middle Ages and the 20th century, European countries saw a **10- to 50-fold decline in their rates of homicide**.

The numbers are consistent with narrative histories of the brutality of life in the Middle Ages, when highwaymen made travel a risk to life and limb and dinners were commonly enlivened by dagger attacks. So many people had their noses cut off that medieval medical textbooks speculated about techniques for growing them back.

Historians attribute this decline to the consolidation of a patchwork of feudal territories into large kingdoms with centralized authority and an infrastructure of commerce. Criminal justice was nationalized, and **zero-sum plunder gave way to positive-sum trade**. People increasingly controlled their impulses and sought to cooperate with their neighbors.

The third transition, sometimes called the Humanitarian Revolution, took off with the Enlightenment. Governments and churches had long maintained order by punishing nonconformists with mutilation, torture and gruesome forms of execution, such as burning, breaking, disembowelment, impalement and sawing in half. The 18th century saw the widespread abolition of judicial torture, including the famous prohibition of "cruel and unusual punishment" in the eighth amendment of the U.S. Constitution.

At the same time, many nations began to whittle down their list of capital crimes from the hundreds (including poaching, sodomy, witchcraft and counterfeiting) to just murder and treason. And a growing wave of countries abolished blood sports, dueling, witchhunts, religious persecution, absolute despotism and slavery.

The fourth major transition is the respite from major interstate war that we have seen since the end of World War II. Historians sometimes refer to it as the Long Peace.

Today we take it for granted that Italy and Austria will not come to blows, nor will Britain and Russia. But centuries ago, the **great powers were almost always at war**, and until quite recently, Western European countries tended to initiate two or three new wars every year. The cliché that the 20th century was "the most violent in history" **ignores the second half** of the century (**and may not even be true of the first** half, if one calculates violent deaths as a proportion of the world's population).

Though it's tempting to attribute the Long Peace to nuclear deterrence, non-nuclear developed states have stopped fighting each other as well. Political scientists point instead to the growth of **democracy, trade and international organizations**—**all of which, the statistical evidence shows, reduce the likelihood of conflict**. They also credit the rising valuation of human life over national grandeur—a hard-won lesson of two world wars.

The fifth trend, which I call the New Peace, involves war in the world as a whole, including developing nations. Since 1946, several organizations have tracked the number of armed conflicts and their human toll world-wide. The bad news is that for several decades, the decline of interstate wars was accompanied by a bulge of civil wars, as newly independent countries were led by inept governments, challenged by insurgencies and armed by the cold war superpowers.

The less bad news is that civil wars tend to kill far fewer people than wars between states. And the best news is that, since the peak of the cold war in the 1970s and '80s, **organized conflicts of all kinds**—civil wars, genocides, repression by autocratic governments, terrorist attacks—have declined throughout the world, and their death tolls have declined even more precipitously.

The rate of documented direct **deaths from political violence (war, terrorism, genocide and warlord militias) in the past decade is an unprecedented few hundredths of a percentage point**. Even if we multiplied that rate to account for unrecorded deaths and the victims of war-caused disease and famine, it would not exceed 1%.

The most immediate cause of this New Peace was the demise of communism, which ended the proxy wars in the developing world stoked by the superpowers and also discredited genocidal ideologies that had justified the sacrifice of vast numbers of eggs to make a utopian omelet. Another contributor was the expansion of international peacekeeping forces, which **really do keep the peace**—not always, but far more often than when adversaries are left to fight to the bitter end.

Finally, the postwar era has seen a cascade of "rights revolutions"—a growing revulsion against aggression on smaller scales. In the developed world, the civil rights movement obliterated lynchings and lethal pogroms, and the women's-rights movement has helped to shrink the incidence of rape and the beating and killing of wives and girlfriends.

In recent decades, the movement for children's rights has significantly reduced rates of spanking, bullying, paddling in schools, and physical and sexual abuse. And the campaign for gay rights has forced governments in the developed world to repeal laws criminalizing homosexuality and has had some success in reducing hate crimes against gay people.

Why has violence declined so dramatically for so long? Is it because violence has literally been bred out of us, leaving us more peaceful by nature?

This seems unlikely. Evolution has a speed limit measured in generations, and many of these declines have unfolded over decades or even years. Toddlers continue to kick, bite and hit; little boys continue to play-fight; people of all ages continue to snipe and bicker, and most of them continue to harbor violent fantasies and to enjoy violent entertainment.

It's more likely that human nature has always comprised inclinations toward violence and inclinations that counteract them—such as self-control, empathy, fairness and reason—what Abraham Lincoln called "the better angels of our nature." Violence has declined because historical circumstances have increasingly favored our better angels.

**The most obvious of these pacifying forces has been the state, with its monopoly on the legitimate use of force**. A disinterested judiciary and police can defuse the temptation of exploitative attack, inhibit the impulse for revenge and circumvent the self-serving biases that make all parties to a dispute believe that they are on the side of the angels.

We see evidence of the pacifying effects of government in the way that rates of killing declined following the expansion and consolidation of states in tribal societies and in medieval Europe. And we can watch the movie in reverse when violence erupts in zones of anarchy, such as the Wild West, failed states and neighborhoods controlled by mafias and street gangs, who can't call 911 or file a lawsuit to resolve their disputes but have to administer their own rough justice.

**Another pacifying force has been commerce**, a game in which everybody can win. As technological progress allows the exchange of goods and ideas over longer distances and among larger groups of trading partners, other **people become more valuable alive than dead**. They switch from being targets of demonization and dehumanization to potential partners in reciprocal altruism.

For example, though the relationship today between America and China is far from warm, we are **unlikely to declare war** on them or vice versa. Morality aside, they make too much of our stuff, and we owe them too much money.

A third peacemaker has been cosmopolitanism—the expansion of people's parochial little worlds through literacy, mobility, education, science, history, journalism and mass media. These forms of virtual reality can prompt people to take the perspective of people unlike themselves and to expand their circle of sympathy to embrace them.

These technologies have also powered an **expansion of rationality and objectivity** in human affairs. People are now less likely to privilege their own interests over those of others. They reflect more on the way they live and consider how they could be better off. Violence is often **reframed as a problem to be solved rather than as a contest to be won.** We devote ever more of our brainpower to guiding our better angels. It is probably no coincidence that the Humanitarian Revolution came on the heels of the Age of Reason and the Enlightenment, that the Long Peace and rights revolutions coincided with the electronic global village.

**HEGEMONIC STRIVING IS 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.

**AND, RESISTANCE DOESN’T PROMPT REFLEXIVITY BUT CAUSES PURPOSELESS MILITARY LASHOUT.**

**Goldstein ‘07**

(Avery, Professor of Global Politics and International Relations @ University of Pennsylvania, “Power transitions, institutions, and China's rise in East Asia: Theoretical expectations and evidence,” Journal of Strategic Studies, Volume 30, Issue 4 & 5 August)

Two closely related, though distinct, theoretical arguments focus explicitly on the consequences for international politics of a shift in power between a dominant state and a rising power. In War and Change in World Politics, Robert Gilpin suggested that **peace prevails when a dominant state’s capabilities enable it to ‘govern’** an international order that it has shaped. Over time, however, **as** economic and technological diffusion proceeds during eras of peace and development, **other states are empowered**. Moreover, the burdens of international governance drain and distract the reigning hegemon, **and challengers** eventually **emerge** who seek to rewrite the rules of governance. As the power advantage of the erstwhile hegemon ebbs, **it may become desperate enough to resort to** the ultima ratio of international politics, **force, to forestall the increasingly urgent demands of a rising challenger**. Or as the power of the challenger rises, it may be tempted to press its case with threats to use force. It is **the** rise and **fall of** the **great powers** that **creates** the circumstances under which major wars, what Gilpin labels ‘**hegemonic wars’**, break out.13 Gilpin’s argument logically encourages pessimism about the implications of a rising China. It leads to the expectation that international trade, investment, and technology transfer will result in a steady diffusion of American economic power, benefiting the rapidly developing states of the world, including China. As the US simultaneously scurries to put out the many brushfires that threaten its far-flung global interests (i.e., the classic problem of overextension), it will be unable to devote sufficient resources to maintain or restore its former advantage over emerging competitors like China. **While the erosion of the once clear American advantage plays itself out, the US will find it ever more difficult to preserve** the **order** in Asia that it created during its era of preponderance. The expectation is an increase in the likelihood for the use of force – either by a Chinese challenger able to field a stronger military in support of its demands for greater influence over international arrangements in Asia, or by a besieged American hegemon desperate to head off further decline. Among the trends that alarm those who would look at Asia through the lens of Gilpin’s theory are **China’s expanding share of** world trade and **wealth** (much of it resulting from the gains made possible by the international economic order a dominant US established); its **acquisition of technology in key sectors that have** both civilian and **military applications** (e.g., information, communications, and electronics linked with the ‘revolution in military affairs’); **and** an **expanding military burden for the US** (as it copes with the challenges of its global war on terrorism and especially its struggle in Iraq) that limits the resources it can devote to preserving its interests in East Asia.14 Although similar to Gilpin’s work insofar as it emphasizes the importance of shifts in the capabilities of a dominant state and a rising challenger, the power-transition theory A. F. K. Organski and Jacek Kugler present in The War Ledger focuses more closely on the allegedly dangerous phenomenon of ‘crossover’– the point at which a dissatisfied challenger is about to overtake the established leading state.15 In such cases, **when the power gap narrows, the dominant state becomes increasingly desperate to forestall, and the challenger becomes increasingly determined to realize the transition to a new international order whose contours it will define.** Though suggesting why a rising China may ultimately present grave dangers for international peace when its capabilities make it a peer competitor of America, Organski and Kugler’s power-transition theory is less clear about the dangers while a potential challenger still lags far behind and faces a difficult struggle to catch up. This clarification is important in thinking about the theory’s relevance to interpreting China’s rise because **a broad consensus prevails** among analysts **that Chinese military capabilities are at a minimum two decades from putting it in a league with the US** in Asia.16 Their **theory**, then, **points with alarm to trends in China’s growing wealth and power relative to the U**nited **S**tates, but especially looks ahead to what it sees as the period of maximum danger – that time when a dissatisfied China could be in a position to overtake the US on dimensions believed crucial for assessing power. Reports beginning in the mid-1990s that offered extrapolations suggesting China’s growth would give it the world’s largest gross domestic product (GDP aggregate, not per capita) sometime in the first few decades of the twentieth century fed these sorts of concerns about a potentially dangerous challenge to American leadership in Asia.17 **The huge gap between Chinese and American military capabilities** (especially in terms of technological sophistication) **has** so far **discouraged prediction of comparably disquieting trends on this dimension, but inklings of similar concerns may be reflected in occasionally alarmist reports about purchases of** advanced **Russian air and naval equipment, as well as concern that Chinese espionage may have undermined the American advantage** in nuclear and missile technology, and speculation about the potential military purposes of China’s manned space program.18 Moreover, **because a dominant state may react to the prospect of a crossover and believe that it is wiser to embrace the logic of preventive war and act early to delay a transition while the task is more manageable**, Organski and Kugler’s powertransition theory also provides grounds for concern about the period prior to the possible crossover.19

#### Shocks to the system are the ONLY propensity for conflict—liberal norms have eradicated warfare and structural violence—every field study proves

HORGAN 9

JOHN is Director of the Center for Science at Stevens Institute of Technology, former senior writer at Scientific American, B.A. from Columbia and an M.S. from Columbia “The End of the Age of War,” Dec 7 http://www.newsweek.com/id/225616/page/1

The economic crisis was supposed to increase violence around the world. The truth is that we are now living in one of the most peaceful periods since war first arose 10 or 12 millennia ago. The relative calm of our era, say scientists who study warfare in history and even prehistory, belies the popular, pessimistic notion that war is so deeply rooted in our nature that we can never abolish it. In fact, war seems to be a largely cultural phenomenon, which culture is now helping us eradicate. Some scholars now even cautiously speculate that the era of traditional war—fought by two uniformed, state-sponsored armies—might be drawing to a close. "War could be on the verge of ceasing to exist as a substantial phenomenon," says John Mueller, a political scientist at Ohio State University.

That might sound crazy, but consider: if war is defined as a conflict between two or more nations resulting in at least 1,000 deaths in a year, there have been no wars since the U.S. invasion of Iraq in 2003 and no wars between major industrialized powers since World War II. Civil wars have also declined from their peak in the early 1990s, when fighting tore apart Rwanda, the Balkans, and other regions. Most armed conflicts now consist of low-level guerrilla campaigns, insurgencies, and terrorism—what Mueller calls the "remnants of war."

These facts would provide little comfort if war's remnants were nonetheless killing millions of people—but they're not. Recent studies reveal a clear downward trend. In 2008, 25,600 combatants and civilians were killed as a direct result of armed conflicts, according to the University of Uppsala Conflict Data Program in Sweden. Two thirds of these deaths took place in just three trouble spots: Sri Lanka (8,400), Afghanistan (4,600), and Iraq (4,000).

Uppsala's figures exclude deaths from "one-sided conflict," in which combatants deliberately kill unarmed civilians, and "indirect" deaths from war-related disease and famine, but even when these casualties are included, annual war-related deaths from 2004 to 2007 are still low by historical standards. Acts of terrorism, like the 9/11 attacks or the 2004 bombing of Spanish trains, account for less than 1 percent of fatalities. In contrast, car accidents kill more than 1 million people a year.

The contrast between our century and the previous one is striking. In the second half of the 20th century, war killed as many as 40 million people, both directly and indirectly, or 800,000 people a year, according to Milton Leitenberg of the University of Maryland. He estimates that 190 million people, or 3.8 million a year, died as a result of wars and state--sponsored genocides during the cataclysmic first half of the century. Considered as a percentage of population, the body count of the 20th century is comparable to that of blood-soaked earlier cultures, such as the Aztecs, the Romans, and the Greeks.

By far the most warlike societies are those that preceded civilization. War killed as many as 25 percent of all pre-state people, a rate 10 times higher than that of the 20th century, estimates anthropologist Lawrence Keeley of the University of Illinois. Our ancestors were not always so bellicose, however: there is virtually no clear-cut evidence of lethal group aggression by humans prior to 12,000 years ago. Then, "warfare appeared in the evolutionary trajectory of an increasing number of societies around the world," says anthropologist Jonathan Haas of Chicago's Field Museum of Natural History. He attributes the emergence of warfare to several factors: growing population density, environmental stresses that diminished food sources, and the separation of people into culturally distinct groups. "It is only after the cultural foundations have been laid for distinguishing 'us' from 'them,' " he says, "that raiding, killing, and burning appear as a complex response to the external stress of environmental problems."

Early civilizations, such as those founded in Mesopotamia and Egypt 6,000 years ago, were extremely warlike. They assembled large armies and began inventing new techniques and technologies for killing, from horse-drawn chariots and catapults to bombs. But nation-states also developed laws and institutions for resolving disputes nonviolently, at least within their borders. These cultural innovations helped reduce the endless, tit-for-tat feuding that plagued pre-state societies.

A host of other cultural factors may explain the more recent drop-off in international war and other forms of social violence. One is a surge in democratic rather than totalitarian governance. Over the past two centuries democracies such as the U.S. have rarely if ever fought each other. Democracy is also associated with low levels of violence within nations. Only 20 democratic nations existed at the end of World War II; the number has since more than quadrupled. Yale historian Bruce Russett contends that international institutions such as the United Nations and the European Union also contribute to this "democratic peace" phenomenon by fostering economic interdependence. Advances in civil rights for women may also be making us more peaceful. As women's education and economic opportunities rise, birthrates fall, decreasing demands on governmental and medical services and depletion of natural resources, which can otherwise lead to social unrest.

Better public health is another contributing factor. Over the past century, average life spans have almost doubled, which could make us less willing to risk our lives by engaging in war and other forms of violence, proposes Harvard psychologist Steven Pinker. At the same time, he points out, globalization and communications have made us increasingly interdependent on, and empathetic toward, others outside of our immediate "tribes."

Of course, the world remains a dangerous place, vulnerable to disruptive, unpredictable events like terrorist attacks. Other looming threats to peace include climate change, which could produce droughts and endanger our food supplies; overpopulation; and the spread of violent religious extremism, as embodied by Al Qaeda. A global financial meltdown or ecological catastrophe could plunge us back into the kind of violent, Hobbesian chaos that plagued many pre--state societies thousands of years ago. "War is not intrinsic to human nature, but neither is peace," warns the political scientist Nils Petter Gleditsch of the International Peace Research Institute in Oslo.

So far the trends are positive. If they continue, who knows? World peace—the dream of countless visionaries and -beauty--pageant -contestants—or something like it may finally come to pass.

#### Focus on social causation of war is un-falsifiable and precludes incremental action to solve violence.

Moore 4

John Moore 4 chaired law prof, UVA. Frm first Chairman of the Board of the US Institute of Peace and as the Counselor on Int Law to the Dept. of State, Beyond the Democratic Peace, 44 Va. J. Int'l L. 341, Lexis

If major interstate war is predominantly a product of a synergy between a potential nondemocratic aggressor and an absence of effective deterrence, what is the role of the many traditional "causes" of war? Past, and many contemporary, theories of war have focused on the role of specific disputes between nations, ethnic and religious differences, arms races, poverty and social injustice, competition for resources, incidents and accidents, greed, fear, perceptions of "honor," and many other factors. Such factors may well play a role in motivating aggression or generating fear and manipulating public opinion. The reality, however, is that while some of these factors may have more potential to contribute to war than others, there may well be an infinite set of motivating factors, or human wants, motivating aggression. It is not the independent existence of such motivating factors for war but rather the circumstances permitting or encouraging high-risk decisions leading to war that is the key to more effectively controlling armed conflict. And the same may also be true of democide. The early focus in the Rwanda slaughter on "ethnic conflict," as though Hutus and Tutsis had begun to slaughter each other through spontaneous combustion, distracted our attention from the reality that a nondemocratic Hutu regime had carefully planned and orchestrated a genocide against Rwandan Tutsis as well as its Hutu opponents. 158 Certainly if we were able to press a button and end poverty, racism, religious intolerance, injustice, and endless disputes, we would want to do so. Indeed, democratic governments must remain committed to policies that will produce a better world by all measures of human progress. The broader achievement of democracy and the rule of law will itself assist in this progress. No one, however, has yet been able to demonstrate the kind of robust correlation with any of these "traditional" causes of war that is reflected in the "democratic peace." Further, given the difficulties in overcoming many of these social problems, an approach to war exclusively dependent on their solution may doom us to war for generations to come. [\*394] A useful framework for thinking about the war puzzle is provided in the Kenneth Waltz classic Man, the State and War, 159 first published in 1954 for the Institute of War and Peace Studies, in which he notes that previous thinkers about the causes of war have tended to assign responsibility at one of the three levels of individual psychology, the nature of the state, or the nature of the international system. This tripartite level of analysis has subsequently been widely copied in the study of international relations. We might summarize my analysis in this classical construct by suggesting that the most critical variables are the second and third levels, or "images," of analysis. Government structures, at the second level, seem to play a central role in levels of aggressiveness in high-risk behavior leading to major war. In this, the "democratic peace" is an essential insight. The third level of analysis, the international system, or totality of external incentives influencing the decision to go to war, is also critical when government structures do not restrain such high-risk behavior on their own. Indeed, nondemocratic systems may not only fail to constrain inappropriate aggressive behavior, they may even massively enable it by placing the resources of the state at the disposal of a ruthless regime elite. It is not that the first level of analysis, the individual, is unimportant - I have already argued that it is important in elite perceptions about the permissibility and feasibility of force and resultant necessary levels of deterrence. It is, instead, that the second level of analysis, government structures, may be a powerful proxy for settings bringing to power those who are disposed to aggressive military adventures and in creating incentive structures predisposed to high-risk behavior. We might also want to keep open the possibility that a war/peace model focused on democracy and deterrence might be further usefully refined by adding psychological profiles of particular leaders as we assess the likelihood of aggression and levels of necessary deterrence. Nondemocracies' leaders can have different perceptions of the necessity or usefulness of force and, as Marcus Aurelius should remind us, not all absolute leaders are Caligulas or Neros. Further, the history of ancient Egypt reminds us that not all Pharaohs were disposed to make war on their neighbors. Despite the importance of individual leaders, however, the key to war avoidance is understanding that major international war is critically an interaction, or synergy, of certain characteristics at levels two and three - specifically an absence of [\*395] democracy and an absence of effective deterrence. Yet another way to conceptualize the importance of democracy and deterrence in war avoidance is to note that each in its own way internalizes the costs to decision elites of engaging in high-risk aggressive behavior. Democracy internalizes these costs in a variety of ways including displeasure of the electorate at having war imposed upon it by its own government. And deterrence either prevents achievement of the objective altogether or imposes punishing costs making the gamble not worth the risk. 160 III. Testing the Hypothesis Hypotheses, or paradigms, are useful if they reflect the real world better than previously held paradigms. In the complex world of foreign affairs and the war puzzle, perfection is unlikely. No general construct will fit all cases even in the restricted category of "major interstate war;" there are simply too many variables. We should insist, however, on testing against the real world and on results that suggest enhanced usefulness over other constructs. In testing the hypothesis, we can test it for consistency with major wars. That is, in looking, for example, at the principal interstate wars in the twentieth century, did they present both a nondemocratic aggressor and an absence of effective deterrence? 161 And although it, by itself, does not prove causation, we might also want to test the hypothesis against settings of potential wars that did not occur. That is, in non-war settings, was there an absence of at least one element of the synergy? We might also ask questions about the effect of changes on the international system in either element of the synergy. That is, what, in general, happens when a totalitarian state makes a transition to stable democracy or vice versa? And what, in general, happens when levels of deterrence are dramatically increased or decreased?

#### Radical skepticism precludes factual comparison and makes judgment virtually impossible.

SØRENSEN 98

Prof of IR [GEORG SØRENSEN, Professor of International Politics and Economics @ Aarhus Univ. “IR Theory after the cold war” Review of International Studies (1998), 24 : 83-100 Cambridge University Press]

What, then, are the more general problems with the extreme versions of the postpositivist position? The first problem is that they tend to overlook, or downplay, the actual insights produced by non-post-positivists, such as, for example, neorealism. It is entirely true that anarchy is no given, ahistorical, natural condition to which the only possible reaction is adaptation. But the fact that anarchy is a historically specific, socially constructed product of human practice **does not make it less real**. In a world of sovereign states, anarchy **is in fact out there in the real world** in some form. In other words, it is not the acceptance of the real existence of social phenomena which produces objectivist reification. Reification is produced by the transformation of historically specific social phenomena into given, ahistorical, natural conditions.21 Despite their shortcomings, neorealism and other positivist theories have produced valuable insights about anarchy, including the factors in play in balance-of-power dynamics and in patterns of cooperation and conflict. Such insights are downplayed and even sometimes dismissed in adopting the notion of 'regimes of truth'. It is, of course, possible to appreciate the shortcomings of neorealism while also recognizing that it has merits. One way of doing so is set forth by Robert Cox. He considers neorealism to be a 'problem-solving theory' which 'takes the world as it finds it, with the prevailing social and power relationships . . . as the given framework for action . . . The strength of the **problem-solving** approach lies in its ability to fix limits or parameters to a problem area and to reduce the statement of a particular problem to a **limited number of variables** which are amenable to relatively close and **precise examination'**.22 At the same time, this 'assumption of fixity' is 'also an ideological bias . . . Problem-solving theories (serve) . . . particular national, sectional or class interests, which are comfortable within the given order'.23 In sum, objectivist theory such as neorealism contains a bias, but that does not mean that it is without merit in analysing particular aspects of international relations from a particular point of view. The second problem with post-positivism is the danger of **extreme relativism** which it contains. If there are no neutral grounds for deciding about truth claims so that each theory will define what counts as the facts, then the door is, at least in principle, open to anything goes. Steve Smith has confronted this problem in an exchange with Øyvind Østerud. Smith notes that he has never 'met a postmodernist who would accept that "the earth is flat if you say so". Nor has any postmodernist I have read argued or implied that "any narrative is as good as any other"'.24 But the problem remains that if we cannot find a minimum of common standards for deciding about truth claims a post-modernist position appears unable to come up with a metatheoretically substantiated critique of the claim that the earth is flat. In the absence of at least some common standards it appears difficult to reject that any narrative is as good as any other.25 The final problem with extreme post-positivism I wish to address here concerns change. We noted the post-modern critique of neorealism's difficulties with embracing change; their emphasis is on 'continuity and repetition'. But extreme post-positivists have their own problem with change, which follows from their metatheoretical position. In short, how can post-positivist ideas and projects of change be distinguished from **pure utopianism** and wishful thinking? Post-positivist radical subjectivism leaves no common ground for choosing between different change projects. A brief comparison with a classical Marxist idea of change will demonstrate the point I am trying to make. In Marxism, social change ( e.g. revolution) is, of course, possible. But that possibility is tied in with the historically specific social structures (material and non-material) of the world. Revolution is possible under certain social conditions but not under any conditions. Humans can change the world, but they are enabled and constrained by the social structures in which they live. There is a dialectic between social structure and human behaviour.26 The understanding of 'change' in the Marxist tradition is thus closely related to an appreciation of the historically specific social conditions under which people live; any change project is not possible at any time. Robert Cox makes a similar point in writing about critical theory: 'Critical theory allows for a normative choice in favor of a social and political order different from the prevailing order, but it limits the range of choice to alternative orders which are feasible transformations of the existing world . . . Critical theory thus contains an element of **utopianism** in the sense that it can represent a coherent picture of an alternative order, but its utopianism is constrained by its comprehension of historical processes. It must reject improbable alternatives just as it rejects the permanency of the existing order'.27 That constraint appears to be absent in post-positivist thinking about change, because radical post-positivism is **epistemologically and ontologically cut off** from evaluating the relative merit of different change projects. Anything goes, or so it seems. That view is hard to distinguish from utopianism and wishful thinking. If neorealism denies change in its overemphasis on continuity and repetition, then radical post-positivism is metatheoretically compelled to embrace any conceivable change project.28

#### Interventionist critical theory fails to create meaningful change; only revitalization of political positivism can.

Milja Kurki 2011, lecturer in international politics at Aberystwyth University and principal investigator of the Political Economies of Democratisation project at Aberystwyth University, September 2011, “The Limitations of the Critical Edge: Reflections on Critical and Philosophical IR Scholarship Today,” Millennium: Journal of International Studies, Vol. 40, No. 1, p. 129-146

It is a sign of the times that while dissatisfaction with the political and economic structures of society is rife, academic criticism of the politico-economic system we live in, and which is simultaneously promulgated by our foreign policy machines around the world, is surprisingly impotent and ineffective. The excesses of the liberal capitalist developmental blueprint received a minor ‘rap on the wrists’ by the crisis of 2009, but nevertheless the structure and the external policies of market democracies around the world remain much the same. If the end of the Cold War is supposed to have ‘ended history’, disappointingly it is the 2009 crisis that seems to be a more telling sign of the end of history; it shows that no real ‘ideational’ alternative seems to exist to global capitalism as a model of growth or to the ideals of liberal market democratisation as a way of expanding the sphere of freedom. The left and other radical politico-economic models are on the wane as authoritarian capitalism presents, it seems, the most viable challenge to the hegemony of liberal market democracy. This pessimism on the question of progressive alternative politics at a time of crisis stems from my recent research, the aim of which has been to interrogate whether room exists for alternative politico-economic visions in today’s democracy assistance. In its initial stages, this research was driven by an optimistic belief in the power of critical theory to generate new and important avenues for rethinking the deeply consequential policy practice of democracy assistance. Yet, worries have appeared about such prospects. One is that it has become evident (somewhat unsurprisingly) that room for critical interventions in policy practice is fairly limited. A far more worrying issue, however, is the observation that critical theory is increasingly lacking in relevance in contributing to the revitalisation of policy practice or perceptive critiques of it. This is because of the abstract and theory-driven nature of critical theory and its lack of realistic understanding as to how to challenge the dominance of hegemonic ideas in today’s foreign policy practice. As Richard Youngs has argued in relation to critical theoretical investigations of democracy support, critical theorists today are dangerously behind the curve on policy practices and theoretically obsessed with critiques of little use to practitioners. 1 It really is rather disappointing for – and a disappointing symptom of – alternative, or so-called ‘critical’, thinking in the social sciences that even when the problems of the dominant model are evident, there is no real systematic, effective or realistic opposition to it. Why is there such a dearth of successful or influential ‘critical’ thinking even in the relatively ‘fruitful’ context of multiple social and economic crises? This is a big question, requiring, for an adequate treatment, a holistic sociological study conducted on multiple levels of analysis of society. Nothing of this nature can be attempted here, but we can, and arguably should, on the 40th anniversary of Millennium: Journal of International Studies – one of the leading critical theory journals in International Relations (IR) – reflect on some of the key trends in critical and philosophical research in IR, with the hope that this might reveal something characteristic of wider trends. With this in mind, I reflect on the prospects of critical theoretical analysis in IR and, in so doing, hope to add a new angle (or rather reintroduce an old angle) to assessment of critical theory’s role in IR. Despite many excellent reviews of the development and fortunes of critical and philosophical research in IR, 2 few have analysed in detail the curious depoliticising and fragmentation-oriented trends afflicting critical theory and associated forms of philosophical analysis today. Also, few analysts have dared to openly comment on the striking failures of critical theory to bring about or facilitate progressive change in today’s world political environment. It is my aim here to open the discussion towards a more (self-) critical analysis of critical theory in IR.¶ We must of course note at the outset that it might be somewhat unrealistic to expect critical theory to directly contribute towards a better world ‘out there’. As Herbert Marcuse pointed out, critical theory ‘possesses no concepts which could bridge the gap between present and its future; holding no promise and showing no success, it remains negative’. 3 Yet, this is not the only interpretation of the role of critical theory. Indeed, I argue that critical and philosophical theorising in IR can and should be reunified, reconcretised and re-politicised. I suggest that not only were philosophical and critical theoretical strands more closely connected to each other in the past, they also had much greater interest in bringing philosophical and critical reflections to bear on real-world political developments. It is these trends we need to recapture in order to resist the increasing structural and disciplinary pulls towards conformism and conservatism, even among critical theorists. At present, as academic professionalisation, disciplinisation and fragmentation take effect, philosophical debates in IR are increasingly depoliticised and abstract and critical theory increasingly offers many divergent but internally rather insular theoretical visions. I suggest that the ‘academic success’ of philosophical and theoretical agendas, or their increasing diversity, is not necessarily progressive in IR, nor emancipatory for the world at large.4¶ This article will proceed in three steps. Firstly, I ask: is there a dearth of critical and philosophical research in IR? As the first section of this article shows, the answer is ‘no’: some of the most famous and productive authors today are critical and philosophical theorists. Yet, I also point out some worrying trends in these literatures. Not only is philosophical research increasingly removed from critical theory, but critical theory itself is becoming fragmented. Also, as is evident from the lack of change in the international sphere, the critical theoretical research does not seem to be particularly effective in imparting critical knowledge or change on society. The reasons for the movement towards depoliticisation, fragmentation and poor effectiveness are pondered in the next section. I suggest here that the failures of critical theory could originate from many causes. They could be suggestive of failures of critical thinking per se. Alternatively, the problems may be disciplinary, structural or strategic. I argue that a hegemonic set of forces in academia and in society at large may be successful in hindering and silencing the critical edge of philosophical and theoretical work in IR. This contributes to a set of strategic failures in critical theorists’ engagements with concrete political practice. In the third section, I argue that to address the praxaeological failures not only should academics seek closer interaction with real-world political struggles 5 – perhaps most urgently in challenging the dominant forms of positivism in global governance practice today – but also that, through various slight reorientations in theorising, critical and philosophical interventions in IR can be re-politicised, brought back closer together and reinvigorated.

**Positivism is the best approach to IR research – the alternative is epistemological anarchy and dangerous relativism**

Vernon **Brown, 2011**. Cardiff U, “The Reflectivist Critique of Positivist IR Theory”, http://www.e-ir.info/?p=7328)

**There is a great deal of support for the positivist approach in IR** **despite** the **critiques** presented above. As the survey by Maliniak et al. showed, seventy percent of American IR scholars still consider themselves as positivists with a number of the rest not yet reflectivist. This is significant as the United States is still considered to be the major force in IR scholarship**. There are many reasons for this continued success of positivism in IR, the majority of which have to do with either the continued reliance on empirical methods or the failure of many reflectivists, especially the post-modernists, to offer any suggestions to fill the epistemological void left by their passing**. David Houghton (2008, p.118) addresses both of these by writing that **despite their critique, reflectivists continue to use empirical, observational methods and that it is not possible to be anything but positivist because**, as he writes, ‘**truth claims about the world have to come from somewhere’**. He also suggests that **reflectivists are essentially engaging in what can only be perceived as a negative exercise since by continually deconstructing theories one will eventually be left with nothing that is considered a legitimate theory.** Another issue raised in response to the reflectivist critique focuses on the pluralism which scholars have called for in the face of epistemological relativism. Lapid (1989, p.249) warns that such **pluralism, ‘If adopted uncritically or taken to its logical conclusion, [can] deteriorate into a condition of epistemological anarchy under which almost any position can legitimately claim equal hearing’, and that in such a state it would become nearly impossible to distinguish theoretical proliferation from theoretical growth. Positivism defends itself by claiming that scholarship is inherently observational, therefore empirical, and that if reflectivism is followed to its logical endpoint there would be no legitimate theories left because they would have been either deconstructed or created without a means of testing their legitimacy**. Conclusion: The critique of positivism by the reflectivists is fundamentally an epistemological one. Each side can and does make compelling arguments showing the strength of their position. While it is important to acknowledge the positivists’ attempts to ground the discipline in a naturalist, scientific area there is still the obvious fact that the assumptions on which their epistemology is based are too easily deconstructed when they attempt to explain phenomena and make predictions in the socially constructed world which IR purports to study. As Milja Kurki (2009, p.442) suggests, positivism fails to acknowledge the possibility that all theories are at some level ‘politically and socially contextualized’. This creates the possibility for positivist theories to create predictions that are fundamentally flawed as they have failed to take into account the context within which their facts are constructed. This in turn allows the reflectivist theorists to deconstruct the predictions due to misunderstandings that arise from the lack of context in the positivists’ predictions**. The question of what positivism has to say in a socially constructed and interpreted world is still an important one, however, since the study of IR is still in many ways observational and therefore empirical. There is also the valid claim that in the face of the possible anarchical pluralism or lack of legitimate theories left by reflectivist critiques there needs to be some sense of scientific and theoretical grounding, and that positivism provides that very thing.** In the end, **reflectivism performs a valuable service in widening the range of legitimate research that is possible by IR scholars and allowing such research to take into account the understanding that the issues studied are birthed by social conventions. There still must be**, however, **some framework within this study to prevent the anarchy that could follow in the wake of reflectivism and while positivism is in no ways perfect, or even close to it, it still provides such a framework that if made to be self-reflective and continually evolving, could provide the stability needed**.

#### Probabilistic evaluation of hypothetical impacts is the only way to grapple with strategic uncertainty

**Krepinevich 9** (Andrew F. Krepinevich, Jr. is a defense policy analyst, currently executive director of the Center for Strategic and Budgetary Assessments. His influential book, The Army and Vietnam, contends that the United States could have won the Vietnam War had the Army adopted a small-unit pacification strategy in South Vietnam's villages, rather than conducting search and destroy operations in remote jungles. Today, he criticizes the counterinsurgency approaches being employed in the Iraq War. He is a West Point graduate. 1/27/2009, “7 Deadly Scenarios: A Military Futurist Explores War in the 21st Century”, <http://www.amazon.com/reader/0553805398?_encoding=UTF8&query=so%20are%20we%20building#reader_0553805398>)

While the Pentagon would dearly like to know the answers to these questions, it is simply not possible. Too many factors have a hand in shaping the future. Of course. Pentagon planners may blithely assume away all uncertainty and essentially bet that the future they fore-cast is the one that will emerge. In this case the U.S. military will be very well prepared—for the predicted future. But history shows that militaries are often wrong when they put too many eggs in one basket. In the summer of 1914, as World War I was breaking out, Europeans felt that the war would be brief and that the troops might be home "before the leaves fall." In reality the Allied and Central Powers engaged in over four years of horrific bloodletting. In World War II the French Army entered the conflict believing it would experience an advanced version of the trench warfare it had encountered in 1914-1918. Instead, France was defeated by the Germans in a lightning campaign lasting less than two months. Finally, in 2003 the Pentagon predicted that the Second Gulf War would play out [with](http://wir.li) a traditional blitzkrieg. Instead, it turned into an irregular war, a "long, hard slog."20 Militaries seem prone to assuming that the next war will be an "updated" version of the last war rather than something quite different. Consequently, they are often accused of preparing for the last war instead of the next. This is where rigorous, scenario-based planning comes into play. It is designed to take uncertainty explicitly into account by incorporating factors that may change the character of future conflict in significant and perhaps profound ways. By presenting a plausible set of paths into the future, scenarios can help senior Pentagon leaders avoid the "default" picture in which tomorrow looks very much like today. If the future were entirely uncertain, scenario-based planning would be a waste of time. But certain things are predictable or at least highly likely. Scenario planners call these things “predetermined elements.” While not quite “done deals,” they are sufficiently well known that their probability of occurring is quite high. For example, we have a very good idea of how many men of military age (eighteen to thirty-one) there will be in the United States in 2020, since all of those males have already been born, and, barring a catastrophic event, the actuarial data on them is quite refined. We know that China has already tested several types of weapons that can disable or destroy satellites. We know that dramatic advances in solid-state lasers have been made in recent years and that more advances are well within the realm of possibility. These "certainties" should be reflected in all scenarios, while key uncertainties should be reflected in how they play out across the different scenarios.21 If scenario-based planning is done well, and if its insights are acted upon promptly, the changes it stimulates in the military may help deter prospective threats, or dissuade enemies from creating threatening new capabilities in the first place.

## 2AC

### Reversibility

#### Scenario planning is consistent with complexity theory

KAVALSKI ‘7

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

In a further examination of the cognitive perspective, some proponents of CIR theory have suggested ‘scenarios’ as tools for the modelling of complexity (Feder 2002; Harcourt and Muliro 2004). Scenarios are defined as ‘imaginative stories of the future that describe alternative ways the present might evolve over a given period of time’ (Heinzen 2004, 4). They focus on subjective interpretations and perceptions. Understanding complexity, therefore, would depend on the relationship between the ‘cognitive schema’ (that is, available knowledge) and the ‘associative network’ (that is, the activation of the links between different concepts) of the observer (Bradfield 2004, 40). The suggestion is that in some sense ‘we create our own consciousness of complexity by seeking it out’ (LaPorte 1975, 329). In this respect, some proponents of CIR theory have asserted the analysis of discourses as an important distinction between human and nonhuman complex systems (Geyer 2003b, 26).14

The intellectual considerations of these epistemological frameworks suggest the challenging conceptual and methodological problems facing CIR theory. On a metatheoretical level, the problem stems from the realization that students of the complexity of international life can never be fully cognizant of the underlying truths, principles and processes that ‘govern reality’ because this would (i) involve (a degree of) simplification of complex phenomena (LaPorte 1975, 50), as well as (ii) imply ‘knowing the not knowable’ (Cioffi-Revilla 1998, 11). As suggested, analytically, the conscious consideration of complexity is hindered by the inherent difficulty of formalizing uncertainty and contingency (Whitman 2005, 105). Some commentators, therefore, have rejected the possibility of constructing comprehensive models for the study of complexity altogether in an attempt to overcome the trap of having to justify their methodologies in ways that are understandable to conventional IR. Therefore, a number of CIR proponents rely on ‘sensemaking’ (Browaeys and Baets 2003, 337; Coghill 2004, 53), ‘whatiffing’ (Beaumont 1994, 171) and other forms of ‘speculative thinking’ (Feder 2002, 114) for their interpretations of the complexity of international life. The claim is that the acceptance of endogeneity as a ‘fact’ of international life provides more insightful modes of analysis than the linear-regression-type approach of traditional IR (Johnston 2005 1040). Without ignoring some controversial aspects of incorporating ontological and epistemological reflection into methodological choices, the claim here is that CIR theory suggests intriguing heuristic devices that both challenge conventional wisdom and provoke analytical imaginations.

Complex international relations theory, therefore, proffers analytical tools both for explaining and understanding discontinuities. It is claimed that its approaches offer ‘antidotes’ to the anxiety that randomness engenders in traditional IR as well as provide a paradigm that accepts uncertainty as inevitable (Feder 2002, 117). Thus, in contrast to the typically linear perceptions of change in mainstream IR— that is, changes in variables occur, but the effect is constant—CIR suggests that ‘things suffer change’. The contention is that the unpredictability of the emergent patterns of international life needs to be conceptualized within the framework of self-organizing criticality—that is, their dynamics ‘adapt to, or are themselves on, the edge of chaos, and most of the changes take place through catastrophic events rather than by following a smooth gradual path’ (Dunn 2007, 99). Complex international relations, in other words, suggests that change entails the possibility of a ‘radical qualitative effect’ (Richards 2000, 1). Therefore, the alleged arbitrariness of occurrences that conventional IR might describe as the effects of randomness (or exogenous/surprising shocks) could (and, in fact, more often than not does) reflect ignorance of their interactions. In fact, the reference to ‘chance’ is merely a metaphor for our lack of knowledge of the dynamics of complexity (Smith and Jenks 2006, 273).

In this respect, CIR theory sketches the fifth debate in the study of international life (see Table 2). Its outlines follow the proposition of the Gulbenkian Commission to break down the division between ‘natural’ and ‘social’ sciences, since both are pervaded by ‘complexity’. Therefore, scholars should not be ‘conceiving of humanity as mechanical, but rather instead conceiving nature as active and creative [to make] the laws of nature compatible with the idea of novelty and of creativity’ (Wallerstein 1996, 61–63). Complex international relations (unlike other IR approaches) acknowledges that patterns of international life are panarchic ‘hybrids’ of physical and social relations (Urry 2003, 18) and advocates such fusion (through the dissolution of the outdated distinction) of scientific realities (Whitman 2005, 45–64). Its complex adaptive thinking in effect challenges the very existence of ‘objective standards’ for the assessment of competing knowledge claims, because these are ‘not nature’s, but rather always human standards, standards which are not given but made . . . adopted by convention by the members of a specific community’ (Hoffmann and Riley 2002, 304). The complex adaptive thinking of CIR theory, therefore, is an instance of ‘true thinking’—‘thinking that looks disorder and uncertainty straight in the face’ (Smith and Jenks 2006, 4).

#### Even if predictions aren’t always accurate planning and modeling can be important tools for resilience. And, demands for linear theories inevitable.

Snyder and Schwab. 2012. Neil Snyder-National Renewable Energy Laboratory and Amy Schwab-National Renewable Energy Laboratory APPROACHES FOR PLANNING AND IMPLEMENTING SUSTAINABLE ENERGY GROWTH IN A COMPLEX WORLD This work was supported by the U.S. Department of Energy under Contract No. DE-AC36-08-G028308 with the National Renewable Energy Laboratory.

 [www.nrel.gov/docs/fy12osti/54506.pdf](http://www.nrel.gov/docs/fy12osti/54506.pdf)] Snyder 5

Building on the broad agreement of the need to move ¶ toward more sustainable energy systems, leaders and decision-makers will continue to request more sophisticated ¶ theories, models, and tools to guide their plans. Although ¶ decision-makers want comfort and predictability, in a ¶ changing world, they most need the perspectives, skills, and ¶ tools for gaining insight into the dynamics of shifting ¶ systems. New tools enable them to explore complex¶ interactions of possible scenarios and to acknowledge that ¶ risk is a feature of the world. This cultivates rapid awareness ¶ and quick reaction time to unpredictable events.¶ In the complex and shifting world of global energy systems, ¶ modelers’ and planners’ roles must shift from attempting to¶ predict the unpredictable to helping decision-makers cope ¶ successfully with the uncertainties of a globally ¶ interconnected world. Planning and modeling become even ¶ more important tools for building resilience and agility to ¶ adapt to emerging challenges and seize opportunities within¶ emerging global energy systems.

**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**

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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.

#### Their anti-nuclearism claims fuel anti-science conspiracy theories- leads the alt to be coopted by right-wingers and makes combatting climate change impossible. You have moral obligation reject their anti-nuclear fear-mongering

Pearce 12

[Fred, freelance author and journalist based in the UK. He serves as environmental consultant for*New Scientist* magazine and is the author of numerous books, including the newly released *The Land Grabbers: The New Fight over Who Owns the Earth*.  <http://e360.yale.edu/feature/why_are_environmentalists_taking_anti-science_positions/2584/> ETB]

Three current issues suggest that the risks of myopic adherence to ideology over rational debate are real: genetically modified (GM) crops, nuclear power, and shale gas development. The conventional green position is that we should be opposed to all three. Yet the voices of those with genuine environmental credentials, but who take a different view, are being drowned out by sometimes abusive and irrational argument. In each instance, the issue is not so much which side environmentalists should be on, but rather the mind-set behind those positions and the tactics adopted to make the case. The wider political danger is that by taking anti-scientific positions, environmentalists end up helping the anti-environmental sirens of the new right. Most major environmental groups — from Friends of the Earth to Greenpeace to the Sierra Club — want a ban or moratorium on GM crops, especially for food. They fear the toxicity of these “Frankenfoods,” are concerned the introduced genes will pollute wild strains of the crops, and worry that GM seeds are a weapon in the takeover of the world’s food supply by agribusiness. For myself, I am deeply concerned about the power of business over the world’s seeds and food supply. But GM crops are an insignificant part of that control, which is based on money and control of trading networks. Clearly there are issues about gene pollution, though research suggesting there is a problem is still very thin. Let’s do the research, rather than trash the test fields, which has been the default response of groups such as Greenpeace, particularly in my home country of Britain. As for the Frankenfoods argument, the evidence is just not there. As the British former campaigner against GMs, Mark Lynas, points out: “Hundreds of millions of people have eaten GM-originated food without a single substantiated case of any harm done whatsoever.” The most recent claim, [published in September in the journal Food and Chemical Toxicology](http://www.sciencedirect.com/science/article/pii/S0278691512005637), that GM corn can produced tumors in rats, has been attacked as flawed in execution and conclusion by a wide range of experts with no axe to grind. In any event, the controversial study was primarily about the potential impact of Roundup, a herbicide widely used with GM corn, and not the GM technology itself. Nonetheless, the reaction of some in the environment community to the reasoned critical responses of scientists to the paper has been to claim a global conspiracy among researchers to hide the terrible truth. One scientist was dismissed on the Web site GM Watch for being “a longtime member of the European Food Safety Authority, i.e. the very body that approved the GM corn in question.” That’s like dismissing the findings of a climate scientist because he sits on the Intergovernmental Panel on Climate Change — the “very body” that warned us about climate change. See what I mean about aping the worst and most hysterical tactics of the climate contrarians? [Stewart Brand](http://e360.yale.edu/feature/stewart_brands_strange_trip_whole_earth_to_nuclear_power/2227/) wrote in his 2009 book Whole Earth Discipline: “I dare say the environmental movement has done more harm with its opposition to genetic engineering than any other thing we’ve been wrong about.” He will see nods of ascent from members of a nascent “green genes” movement — among them environmentalist scientists, such as Pamela Ronald of the University of California at Davis — who say GM crops can advance the cause of sustainable agriculture by improving resilience to changing climate and reducing applications of agrochemicals. Yet such people are routinely condemned as apologists for an industrial conspiracy to poison the world. Thus, Greenpeace in East Asia claims that children eating nutrient-fortified GM “golden rice” are being used as “guinea pigs.” And its UK Web site’s introduction to its global campaigns says, “The introduction of genetically modified food and crops has been a disaster, posing a serious threat to biodiversity and our own health.” Where, ask their critics, is the evidence for such claims? The problem is the same in the energy debate. Many environmentalists who argue, as I do, that climate change is probably the big overarching issue facing humanity in the 21st century, nonetheless often refuse to recognize that nuclear power could have a role in saving us from the worst. Nuclear power is the only large-scale source of low-carbon electricity that is fully developed and ready for major expansion. Yes, we need to expand renewables as fast as we can. Yes, we need to reduce further the already small risks of nuclear accidents and of leakage of fissile material into weapons manufacturing. But as George Monbiot, Britain’s most prominent environment columnist, puts it: “To abandon our primary current source of low carbon energy during a climate change emergency is madness.” Monbiot attacks the gratuitous misrepresentation of the risks of radiation from nuclear plants. It is widely suggested, on the basis of a thoroughly discredited piece of Russian head-counting, that up to a million people were killed by the Chernobyl nuclear accident in 1986. In fact, it is far from clear that many people at all — beyond the 28 workers who received fatal doses while trying to douse the flames at the stricken reactor — actually died from Chernobyl radiation. Certainly, the death toll was nothing remotely on the scale claimed. “We have a moral duty,” Monbiot says, “not to spread unnecessary and unfounded fears. If we persuade people that they or their children are likely to suffer from horrible and dangerous health problems, and if these fears are baseless, we cause great distress and anxiety, needlessly damaging the quality of people’s lives.” Many people have a visceral fear of nuclear power and its invisible radiation. But for environmentalists to fan the flames — especially when it gets in the way of fighting a far more real threat, from climate change — seems reckless, anti-scientific and deeply damaging to the world’s climate future. One sure result of Germany [deciding to abandon nuclear power](http://e360.yale.edu/feature/germanys_unlikely_champion_of_a_radical_green_energy_path/2401/) in the wake of last year’s Fukushima nuclear accident (calamitous, but any death toll will be tiny compared to that from the tsunami that caused it) will be rising carbon emissions from a revived coal industry. By one estimate, the end of nuclear power in Germany will result in an extra 300 million tons of carbon dioxide reaching the atmosphere between now and 2020 — more than the annual emissions of Italy and Spain combined. Last, let’s look at the latest source of green angst: shale gas and the drilling technique of hydraulic fracturing, or fracking, used to extract it. There are probably good reasons for not developing shale gas in many places. Its extraction can pollute water and cause minor earth tremors, for instance. But at root this is an argument about carbon — a genuinely double-edged issue that needs debating. For there is a good environmental case to be made that shale gas, like nuclear energy, can be part of the solution to climate change. That case should be heard and not shouted down.

**We have a moral obligation to advocate nuclear---any alternative results in extinction due to warming**

**Baker 12**—Executive Director of PopAtomic Studios, the Nuclear Literacy Project (7/25/12, Suzy, Climate Change and Nuclear Energy: We Need to Talk, ansnuclearcafe.org/2012/07/25/climate-change-and-nuclear-energy-we-need-to-talk/)

Ocean Acidification¶ While I was making artistic monuments to single celled organisms in the ceramics studio, new research was emerging about ocean acidification affecting these beautiful and integral pieces of our ecosystem. **As the ocean absorbs excess carbon** from humans burning fossil fuels, **the pH of the ocean is rapidly changing**. This means that **our** ancient **oxygen-making pals cannot properly do their job**. As their ocean home becomes inhospitable, **they are dying off in droves**. **This not only impacts the ocean’s ability to naturally sequester** man made **carbon** emissions; **it** also **negatively impacts the entire food chain**, since they are the primary food source for other multi-cellular ocean creatures, some of which we enjoy eating.¶ Oh, and **did I mention that these** little **phytoplankton are** also **responsible for creating the ozone layer that protects all life on the planet from** cosmic **radiation**, **and they churn out** 70-**80% of the oxygen** **we breathe?** These creatures are much more than just a pretty floating form.¶ **Ocean acidification is the issue that brought me to supporting nuclear energy**. Ocean acidification is an often-overlooked aspect of climate change that is potentially more threatening than the heat, the super storms, the fires, the drought, the crop losses, and all of the other trends that we are seeing now, which climate scientists have been warning us about for decades.¶ Climate Change and Nuclear Energy: Like Oil and Water?¶ It didn’t take long for me to find out that in the nuclear industry, climate change is not something we all agree on. Discussing climate change as a concern is often polarizing, and brings up intrinsic conflicts of interest in the larger energy sector (the companies who design/build/run the nuclear plants also happen to design/build/run the fossil fuel plants). I’ve been advised by people who deeply care about me, and the success of my organization, not to bring up climate at all, and to be extremely careful not to base my support of nuclear on climate issues. I’ve also been specifically advised not to make the argument that nuclear energy is the only solution to climate change.¶ When you are the new kid, it is usually best not to make waves if you can help it. So, for the most part, I have heeded that advice and held my tongue, despite myself.¶ However, **as I** watch the news (and my wilting vegetable garden) and **see the magnitude of human suffering** that is **directly related to increasingly severe weather events**, **I cannot keep silent**. **Climate change is why I am here supporting nuclear energy, so what am I doing not talking about it?¶** The CEO of Exxon Mobile recently made clear that despite his company’s acknowledgement of the irrefutable evidence of climate change, and the huge ecological and human cost, he has no intentions of slowing our fossil fuel consumption. In fact, he goes as far to say that getting fossil fuels to developing nations will save millions of lives. While I agree that we need stronger, better energy infrastructure for our world’s poorest nations, I wholly disagree that fossils are the right fit for the job.¶ Fossil fuel usage could be cast as a human rights issue only to the extent that access to reliable and affordable electricity determines what one’s standard of living is. At the same time, **fossil fuel usage is the single largest threat to our planet and every species on it**. **Disregarding the impacts that fossil fuel use poses**, merely to protect and increase financial profits, **is unethical**, and cloaking fossil fuel use as a human rights issue is immoral.¶ Although we are all entitled to our own opinions and beliefs, **the idea that climate** change **and ocean acidification** **are** even **up for debate** **is not reasonable**. Just think: **The CEO of the largest fossil fuel** **company in America freely speaks out about climate change, while nuclear energy advocates are pressured to stay silent** on the subject.¶ **Silence is No Longer an Option**¶ I am someone who avoids conflict, who seeks consensus in my personal and professional lives, and so I have followed the advice of well-meaning mentors and stayed silent in hopes of preserving a false peace within my pro-nuclear circles, including my family and friends. But my keeping silent is now over— starting here and starting now—**because this is too big and too important to stay silent.** I am not alone in believing this, and the nuclear industry does itself no favors by tacitly excluding the growing movement of people who are passionate about the need to use nuclear energy to address climate change.¶ And **nuclear power is the only realistic solution**. **It would be great if there were** also **other viable solutions** that could be easily and quickly embraced; **however, the numbers just don’t work out**. **Renewables** and conservation **may have done more good if we had utilized them on a large scale 40 years ago**, when we were warned that our ecosystem was showing signs of damage from fossils fuels…**but** at this point **it’s really too late** for them. And burning more fossil fuels right now, when we have the technologies and know-how to create a carbon-free energy economy, would be the height of foolishness.¶ **In the meantime, there is real human suffering, and we here in the developed world are directly causing it. Our poorest brothers and sisters cannot escape the heat.** **They cannot import food when their crops fail.** They cannot buy bottled water when there is a drought. **They cannot “engineer a solution”** any more than my childhood friends the phytoplankton can.¶ ¶ Energy Choices as an Ethical Obligation¶ **We have an ethical obligation to stop killing people with our energy consumption**. That statement may sound oversimplified, but let’s be honest—we know that fossil fuels kill approximately 1.3 million people each year through respiratory diseases and cancers, and the death toll for climate change related events rises every day. Yet, we do nothing but dither about climate change politics. Where is the outrage?¶ The fossil fuel industry has been successful at presenting a united front and maintaining consistent strategic communications. In contrast, the safety record and clean energy contributions of nuclear are always overshadowed by politics favoring fossil fuel use. If anything, nuclear advocates should be particularly sensitive that the very same politics are happening with climate science.¶ **We should be championing nuclear energy as a science-based solution, instead of enforcing a meek code of silence**. People from outside the nuclear industry, like Gwyneth Cravens, Barry Brooks and Tom Blees, have pointed out these relationships, yet the nuclear industry has yet to internalize and accept these realities.¶ **How can we expect people to listen to science and not politics when it comes to nuclear energy, but not climate change?¶** Disagreeing with a policy does not change the facts. You can disagree with policy to limit carbon emissions, but that doesn’t change the fact that our fossil fuel consumption is changing the PH of our oceans. **Many people disagree with the use of nuclear energy, but that doesn’t change the fact that nuclear is our largest source of carbon free electricity and the safest source of electricity per kilowatt hour.¶** Nuclear Must Lead by Example¶ **If we want the public to overcome the cognitive dissonance between science and policy when it comes to nuclear energy, we need to lead by example and overcome our own cognitive dissonance when it comes to climate change** — even if it means risking our own interests as members of the larger energy industry. We are not going to run out of fossil fuels any time soon, so the decision to move to carbon-free energy—to move to nuclear energy—must be made willingly, and based on ethical principles, not the limits of our natural resources.¶ As green groups wait endlessly for renewable technologies to have some kind of breakthrough, and nuclear supporters stay mum on climate change, we continue using fossil fuels. Our collective inaction is allowing the destruction of our planet’s ecosystem, the dying of our oceans, and the suffering of the poorest members of our own species. The climate conversation has become so convoluted by politics and greed that many smart, compassionate people have “thrown in the towel.” We should be more concerned than ever at our lack of a comprehensive global response.¶ I strongly believe that **there’s still time to reclaim the dialogue about climate change based on ocean acidification evidence, and to use nuclear technologies to improve the long-term outcome for our planet** and our species. **The first step is acknowledging the complicated** and unique **role of the nuclear industry in this conflict**, **and the conflicts of interest that are impeding open communication.** The second step is to realize that the climate change community is a potential ally, and that openly addressing the subject of climate change in our communications is in the best interest of the nuclear community. The third step is choosing to do the right thing, not just the polite thing, and reclaim our legitimate role in the energy community as the “top dog” of carbon-free electricity, instead of quietly watching natural gas become “the new coal.”¶ Climate change is not going away—it is getting worse—and **each one of us** in the nuclear community **has an ethical obligation to speak up and to do something about it**. I am speaking up for the oceans, for the cyano-bacteria and diatoms and our shared mitochondrial RNA that still fills me with wonder at the beauty of this world. Please join me if you can, to speak up for what you love—and if you cannot, please understand that we all remain nuclear advocates, and that the nuclear community is much stronger with the no-longer-silent climate change harbingers in it.

**Us intervention is inevitable – the plan prevents ineffective forms of engagement**

Robert **Kagan 2011**. Contributing editor to The Weekly Standard and a senior fellow in foreign policy at the Brookings Institution. "The Price of Power" Jan 24 Vol 16 No18 www.weeklystandard.com/articles/price-power\_533696.html?page=3

**In theory, the United States could refrain from intervening abroad. But, in practice, will it? Many assume today that the American public has had it with interventions, and** Alice **Rivlin** certainly **reflects a strong current of opinion when she says that “much of the public does not believe that we need to go in and take over other people’s countries.” That sentiment has often been heard after interventions**, especially those with mixed or dubious results. **It was heard after the four-year-long war in the Philippines, which cost 4,000 American lives and untold Filipino casualties. It was heard after Korea and after Vietnam. It was heard after Somalia. Yet the reality has been that after each intervention, the sentiment against foreign involvement has faded, and the United States has intervened again. Depending on how one chooses to count, the United States has undertaken roughly 25 overseas interventions since 1898:** Cuba, 1898 The Philippines, 1898-1902 China, 1900 Cuba, 1906 Nicaragua, 1910 & 1912 Mexico, 1914 Haiti, 1915 Dominican Republic, 1916 Mexico, 1917 World War I, 1917-1918 Nicaragua, 1927 World War II, 1941-1945 Korea, 1950-1953 Lebanon, 1958 Vietnam, 1963-1973 Dominican Republic, 1965 Grenada, 1983 Panama, 1989 First Persian Gulf war, 1991 Somalia, 1992 Haiti, 1994 Bosnia, 1995 Kosovo, 1999 Afghanistan, 2001-present Iraq, 2003-present**That is one intervention every 4.5 years on average. Overall, the United States has intervened or been engaged in combat somewhere in 52 out of the last 112 years**, or roughly 47 percent of the time. **Since the end of the Cold War, it is true, the rate of U.S. interventions has increased, with an intervention roughly once every 2.5 years** and American troops intervening or engaged in combat in 16 out of 22 years, or over 70 percent of the time, since the fall of the Berlin Wall. **The argument for returning to “normal” begs the question: What is normal for the United States? The historical record of the last century suggests that it is not a policy of nonintervention**. This record ought to raise doubts about the theory that American behavior these past two decades is the product of certain unique ideological or doctrinal movements, whether “liberal imperialism” or “neoconservatism.” Allegedly “realist” presidents in this era have been just as likely to order interventions as their more idealistic colleagues. George H.W. Bush was as profligate an intervener as Bill Clinton. He invaded Panama in 1989, intervened in Somalia in 1992—both on primarily idealistic and humanitarian grounds—which along with the first Persian Gulf war in 1991 made for three interventions in a single four-year term. Since 1898 the list of presidents who ordered armed interventions abroad has included William McKinley, Theodore Roose-velt, William Howard Taft, Woodrow Wilson, Franklin Roosevelt, Harry Truman, Dwight Eisenhower, John F. Kennedy, Ronald Reagan, George H.W. Bush, Bill Clinton, and George W. Bush. **One would be hard-pressed to find a common ideological or doctrinal thread among them—unless it is the doctrine and ideology of a mainstream American foreign policy that leans more toward intervention than many imagine or would care to admit.** **Many don’t want to admit it, and the only thing as consistent as this pattern of American behavior has been the claim by contemporary critics that it is abnormal and a departure from American traditions**. The anti-imperialists of the late 1890s, the isolationists of the 1920s and 1930s, the critics of Korea and Vietnam, and the critics of the first Persian Gulf war, the interventions in the Balkans, and the more recent wars of the Bush years have all insisted that the nation had in those instances behaved unusually or irrationally. And yet the behavior has continued.To note this consistency is not the same as justifying it. The United States may have been wrong for much of the past 112 years. Some critics would endorse the sentiment expressed by the historian Howard K. Beale in the 1950s, that “the men of 1900” had steered the United States onto a disastrous course of world power which for the subsequent half-century had done the United States and the world no end of harm. **But whether one lauds or condemns this past century of American foreign policy—and one can find reasons to do both—the fact of this consistency remains. It would require not just a modest reshaping of American foreign policy priorities but a sharp departure from this tradition to bring about the kinds of changes that would allow the United States to make do with a substantially smaller force structure**. Is such a sharp departure in the offing**? It is no doubt true that many Americans are unhappy with the on-going warfare in Afghanistan and to a lesser extent in Iraq, and that, if asked, a majority would say the United States should intervene less frequently in foreign nations, or perhaps not at all.** **It may also be true that the effect of long military involvements in Iraq and Afghanistan may cause Americans and their leaders to shun further interventions at least for a few years**—as they did for nine years after World War I, five years after World War II, and a decade after Vietnam. This may be further reinforced by the difficult economic times in which Americans are currently suffering. The longest period of nonintervention in the past century was during the 1930s, when unhappy memories of World War I combined with the economic catastrophe of the Great Depression to constrain American interventionism to an unusual degree and produce the first and perhaps only genuinely isolationist period in American history. **So are we back to the mentality of the 1930s? It wouldn’t appear so. There is no great wave of isolationism sweeping the country.** There is not even the equivalent of a Patrick Buchanan, who received 3 million votes in the 1992 Republican primaries. Any isolationist tendencies that might exist are severely tempered by continuing fears of terrorist attacks that might be launched from overseas. Nor are the vast majority of Americans suffering from economic calamity to nearly the degree that they did in the Great Depression. **Even if we were to repeat the policies of the 1930s, however, it is worth recalling that the unusual restraint of those years was not sufficient to keep the United States out of war.** On the contrary, the United States took actions which ultimately led to the greatest and most costly foreign intervention in its history. Even the most determined and in those years powerful isolationists could not prevent it. **Today there are a number of obvious possible contingencies that might lead the United States to substantial interventions overseas, notwithstanding the preference of the public and its political leaders to avoid them. Few Americans want a war with Iran, for instance. But it is not implausible that a president—indeed, this president—might find himself in a situation where military conflict at some level is hard to avoid**. The continued success of the international sanctions regime that the Obama administration has so skillfully put into place, for instance, might eventually cause the Iranian government to lash out in some way—perhaps by attempting to close the Strait of Hormuz. Recall that Japan launched its attack on Pearl Harbor in no small part as a response to oil sanctions imposed by a Roosevelt administration that had not the slightest interest or intention of fighting a war against Japan but was merely expressing moral outrage at Japanese behavior on the Chinese mainland. Perhaps in an Iranian contingency, the military actions would stay limited. But perhaps, too, they would escalate. One could well imagine an American public, now so eager to avoid intervention, suddenly demanding that their president retaliate. **Then there is the possibility that a military exchange between Israel and Iran, initiated by Israel, could drag the United States into conflict with Iran. Are such scenarios so farfetched that they can be ruled out by Pentagon planners? Other possible contingencies include a war on the Korean Peninsula**, where the United States is bound by treaty to come to the aid of its South Korean ally; **and possible interventions in Yemen or Somalia,** should those states fail even more than they already have and become even more fertile ground for al Qaeda and other terrorist groups. And what about those “humanitarian” interventions that are first on everyone’s list to be avoided? Should another earthquake or some other natural or man-made catastrophe strike, say, Haiti and present the looming prospect of mass starvation and disease and political anarchy just a few hundred miles off U.S. shores, with the possibility of thousands if not hundreds of thousands of refugees, **can anyone be confident that an American president will not feel compelled to send an intervention force to help?Some may hope that a smaller U.S. military, compelled by the necessity of budget constraints, would prevent a president from intervening. More likely, however, it would simply prevent a president from intervening effectively. This, after all, was the experience of the Bush administration in Iraq and Afghanistan**. Both because of constraints and as a conscious strategic choice, **the Bush administration sent too few troops to both countries. The results were lengthy, unsuccessful conflicts, burgeoning counterinsurgencies, and loss of confidence in American will and capacity**, as well as large annual expenditures. Would it not have been better, and also cheaper, to have sent larger numbers of forces initially to both places and brought about a more rapid conclusion to the fighting? **The point is, it may prove cheaper in the long run to have larger forces that can fight wars quickly and conclusively**, as Colin Powell long ago suggested, than to have smaller forces that can’t. Would a defense planner trying to anticipate future American actions be wise to base planned force structure on the assumption that the United States is out of the intervention business? Or would that be the kind of penny-wise, pound-foolish calculation that, in matters of national security, can prove so unfortunate? **The debates over whether and how the United States should respond to the world’s strategic challenges will and should continue. Armed interventions overseas should be weighed carefully, as always**, with an eye to whether the risk of inaction is greater than the risks of action. And as always, these judgments will be merely that: judgments, made with inadequate information and intelligence and no certainty about the outcomes. No foreign policy doctrine can avoid errors of omission and commission. But **history has provided some lessons, and for the United States the lesson has been fairly clear: The world is better off, and the United States is better off, in the kind of international system that American power has built and defended.**

**SMRs wont lead to mining – they use 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.

**Anti-imperialism undermines struggles for justice – the perm is necessary to defend threatened groups and undermine global hierarchies**

Martin **Shaw 2002**, International Relations and Politics, University of Sussex “Exploring imperia: Western-global power amidst the wars of quasi-imperial states” Dec 11 2002 www.theglobalsite.ac.uk/press/212shaw.htm

The abuses of anti-imperialism¶ It is worth asking how **the politics of anti-imperialism distorts Western leftists' responses to global struggles for justice**. John **Pilger**, for example, **consistently seeks to minimise the crimes of Milosevic in Kosovo, and to deny their genocidal character - purely because these crimes formed part of the rationale for Western intervention against Serbia**. He never attempted to minimise the crimes of the pro-Western Suharto regime in the same way. [In a more academic way, Kees van der Pijl also minimises the responsibility of the Serbian dictator and his regime - see Shaw 2002b.] The crimes of quasi-imperial regimes are similar in cases like Yugoslavia and Indonesia, but the West's attitudes towards them are undeniably uneven and inconsistent**. To take as the criterion of one's politics opposition to Western policy, rather than the demands for justice of the victims of oppression as such, distorts our responses to the victims and our commitment to justice. We need to support the victims regardless of whether Western governments take up their cause or not; we need to judge Western power not according to a general assumption of 'new imperialism' but according to its actual role in relation to the victims.¶** **The task** for civil society in the West **is not**, therefore **to oppose Western state policies as a matter of course, à la Cold War, but to mobilise solidarity with democratic oppositions and repressed peoples, against authoritarian, quasi-imperial states**. **It is to demand more effective global political, legal and military institutions that genuinely and consistently defend the interests of the most threatened groups.** It is to grasp the contradictions among and within Western elites, conditionally allying themselves with internationalising elements in global institutions and Western governments, against nationalist and reactionary elements. The arrival in power of George Bush II makes this discrimination all the more urgent.¶ In the long run, **we need to develop a larger politics of global social democracy and an ethic of global responsibility that address the profound economic, political and cultural inequalities between Western and non-Western worlds. We will not move far in these directions, however, unless we grasp the life-and-death struggles between many oppressed peoples and the new local imperialisms, rather than subsuming all regional contradictions into the false synthesis of a new Western imperialism.**

**Detterence checks nuclear war**

**Schneider** **2009** [Mark. Fellow @ National Institute for Public Policy. “Prevention Through Strength: Is Nuclear Superiority Enough” Comparative Strategy, April 2009. EBSCO]

Western nuclear powers—the United States, Britain, and France—vastly outgun the rogue states in every measurable respect. However, this alone may not be enough to ensure deterrence. The problem, as Dr. Keith B. Payne has observed, is that, “**Effective deterrence threats must be credible to the opponents. Unfortunately, leaders of terrorist states and tyrants who recognize the appropriate priority we place on avoiding civilian casualties may not believe U.S. deterrent threats that would produce the high yields and moderate accuracies of the remaining Cold War arsenal.”**36 The problem is complicated by the ceaseless efforts of the political left to delegitimize nuclear deterrence. In the pre–World War II era, or even during the late Cold War, the use of chemical and biological agents by a minor nation against a great power would have been suicidal. Today, however, **we have to take the threat of WMD attacks, even by a much weaker nation, very seriously in significant part because of the delegitimization of nuclear deterrence in the Western world.** In my view, **the delegitimization of nuclear deterrence by the political left is one of the most serious problems we face in dealing with WMD proliferation**. The left-wing view of nuclear weapons in the United States has moved, to some degree, into the mainstream. Distinguished former American leaders such a George P. Shultz, William J. Perry, Henry A. Kissinger, and Sam Nunn, despite the manifest failure of arms control to constrain the WMD threat, call for “A world free of Nuclear Weapons” because “ . . . the United States can address almost all of its military objectives by non-nuclear means.”37 This view ignores the complete lack of plausibility of creating a verification regime involving the abolition of nuclear weapons with acceptable risk, the consequences of cheating and the lack of any credible response option if it is actually discovered that an authoritarian regime had retained a sizable nuclear stockpile, and the military implication of the other types of weapons of mass destruction—chemical and biological (CBW) attack, including the advanced agents now available to potential enemies of the United States and our allies. **A credible U.S. nuclear deterrent is necessary to deal with existing threats to the very survival of the U.S., its allies, and its armed forces if they are subject to an attack using WMD**. As former Secretary of Defense Harold Brown and former Deputy Secretary of Defense John Deutch wrote in The Wall Street Journal, “However, the goal, even the aspirational goal, of eliminating all nuclear weapons is counterproductive. It will not advance substantive progress on nonproliferation; and it risks compromising the value that nuclear weapons continue to contribute, through deterrence, to U.S. security and international stability.”38 **If WMD attacks were actually made against Western cities, the reaction to them by civilian populations would likely be extreme but it would be too late to impact deterrence. There would likely be overwhelming demand by the affected populations to make the attacks stop.** The U.S. National Strategy for Combating the Proliferation of Weapons of Mass Destruction recognized that we must respond to WMD attack rapidly and that, “The primary objective of a response is to disrupt an imminent attack or an attack in progress, and eliminate the threat of future attacks.”39 In the words of Dr. William Graham, Chairman of the Congressional Electromagnetic Pulse (EMP) Commission: Failure to provide a credible deterrent will result in a wave of nuclear proliferation with serious national security implications. **When dealing with the rogue states the issue is not the size of the U.S. nuclear deterrent but the credibility of its use in response to chemical or biological weapons use and its ability to conduct low collateral damage nuclear attacks against WMD capabilities and delivery systems including very hard underground facilities for purposes of damage limitation. We must also have the capability to respond promptly. The United States nuclear guarantee is a major deterrent to proliferation. If we do not honor that guarantee, or devalue it, many more nations will obtain nuclear weapons**.40 There are only two ways to achieve a rapid end to a conflict: surrender or, alternatively, prompt and effective counterforce strikes designed to limit damage by destroying the adversary’s offensive capability. In such a charged atmosphere there likely would be demands in many states for massive retaliation against the attacker. Prewar debates about nuclear strategy, proportionality, and international law may vanish once the scope of the tragedy was fully appreciated.

### K 2

**The symbolism of death comes from subjective evaluations that are only possible if life is given intrinsic value**

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.

**Baudrillard’s critique of death has no bearing in subjective or objective realities – it is merely hyperreal postulation.**

**Silverman, no date.**

[deathbed visions and escorts, good death, <http://www.deathreference.com/Da-Em/Dead-Ghetto.html>, dead ghetto]

Baudrillard continues by saying that death can also be denied, or, in a sense, abolished, by segregating the dead in graveyards, which become "ghettos." Following an analysis of Baudrillard's concept by Bradley Butterfield, one may begin with primitive societies in which life and death were seen as partners in symbolic exchanges. As society evolved the dead were excluded from the realm of the living by assigning them to graveyards, the ghettos, where they no longer have a role to play in the community of the living. To be dead is to be abnormal, where for primitives it was merely another state of being human. For these earlier societies it was necessary to use their resources through ritual feasts and celebrations for the dead in order to avoid a disequilibrium where death would have a claim on them. In more evolved societies focused on economy, death is simply the end of life—the dead can no longer produce or consume, and thus are no longer available for exchanges with the living.¶ However, **Baudrillard argues that the "death of death" is not complete because private mourning practices still exist. Baudrillard makes a similar argument on old age: "Old age has merely become a marginal and ultimately a social slice of life—a ghetto**, a reprieve and the slide into death. Old age is literally being eliminated," as it ceases to be symbolically acknowledged (Baudrillard 1993, p. 163).¶ Baudrillard presents an intellectual construct founded on the concepts of de Saussure and Mauss which, by contrast, are derived from a factual basis. Thus Baudrillard's construct is one step removed from reality. **The majority of real people, even in the complex societies of the twenty-first century, however, have not banished death to a ghetto where the dead no longer play a role in their lives. The presence of the deceased continues to play a role in their lives on an ongoing basis** (Klass, Silverman, and Nickman 1996). Because the deceased are still important to the living**, Baudrillard's concept represents an interesting intellectual exercise—a hyperreality, to use his own term—but not an accurate representation of reality.**

**No risk of continual war making – institutional safeguards check**

Allen **Buchanan 7**, Professor of Philosophy and Public Policy at Duke, 2007 (Preemption: military action and moral justification, pg. 128)

The intuitively plausible idea behind the 'irresponsible act' argument is that, other things being equal, the higher the stakes in acting and in particular the greater the moral risk, the higher are the *epistemic requirements* for justified action. The decision to go to war is generally a high stakes decision par excellence and the moral risks are especially great, for two reasons. First, unless one is justified in going to war, one's deliberate killing of enemy combatants will he murder, indeed mass murder. Secondly, at least in large-scale modem war, it is a virtual certainty that one will kill innocent people even if one is justified in going to war and conducts the war in such a way as to try to minimize harm to innocents. Given these grave moral risks of going to war, quite apart from often substantial prudential concerns, some types of justifications for going to war may simply be too subject to abuse and error to make it justifiable to invoke them. The 'irresponsible act' objection is not a consequentialist objection in any interesting sense. It does not depend upon the assumption that every particular act of going to war preventively has unacceptably bad consequences (whether in itself or by virtue of contributing lo the general acceptance of a principle allowing preventive war); nor does it assume that it is always wrong lo rely on a justification which, if generally accepted, would produce unacceptable consequences. Instead, the "irresponsible act' objection is more accurately described as an agent-centered argument and more particularly an argument from moral epistemic responsibility. The 'irresponsible act' objection to preventive war is highly plausible if— but only if—one assumes that the agents who would invoke the preventive-war justification are, as it were, *on their own* in making the decision to go to war preventively. In other words, the objection is incomplete unless the context of decision-making is further specified. Whether the special risks of relying on the preventive-war justification are unacceptably high will depend, *inter alia,* upon whether the decision-making process includes effective provisions for redu­cing those special risks. Because the special risks are at least in significant part epistemic—due to the inherently speculative character of the preventive war-justification—the epistemic context of the decision is crucial. Because institutions can improve the epistemic performance of agents, it is critical to know what the institutional context of the preventive-war decision is, before we can regard the 'irresponsible agent' objection as conclusive. Like the 'bad practice' argument, this second objection to preventive war is inconclusive because it does not consider— and rule out—the possibility that well-designed institutions for decision-making could address the problems that would otherwise make it irresponsible for a leader to invoke the preventive-war justification.

**Psychoanalysis can’t be scaled up to explain society or politics – they can’t explain our impacts and definitely can’t solve**

**Sharpe**, lecturer, philosophy and psychoanalytic studies, and Goucher, senior lecturer, literary and psychoanalytic studies – Deakin University, **‘10**

(Matthew and Geoff, Žižek and Politics: An Introduction, p. 182 – 185, Figure 1.5 included)

Can we bring some order to this host of criticisms? It is remarkable that, for all the criticisms of Žižek’s political Romanticism, no one has argued that the ultra- extremism of **Žižek’s political position might reflect his untenable attempt to shape his model for political action on the curative** final **moment in clinical psychoanalysis.** The differences between these two realms, listed in Figure 5.1, are nearly too many and too great to restate **– which has** perhaps **caused** the theoretical oversight**.** The key thing is this. **Lacan’s** notion of **traversing the fantasy involves** the **radical transformation of people’s subjective structure: a refounding of** their most **elementary beliefs** about themselves, the world, and sexual difference. **This is** undertaken **in the security of the clinic**, on the basis of the analysands’ voluntary desire to overcome their inhibitions, symptoms and anxieties.

As a clinical and existential process, it has its own independent importance and authenticity. **The analysands**, in transforming their subjective world, **change the way they regard the objective**, shared social reality outside the clinic. But they do not transform the world. **The political relevance of the clinic** can only be (a) as a supporting moment in ideology critique or (b) as a fully- fl edged model of politics, provided that the political subject and its social object are ultimately identical. Option (*b*), Žižek’s option, **rests on the idea**, not only **of a subject** who becomes who he is only through his (mis) recognition of the objective sociopolitical order, but **whose ‘traversal** of the fantasy’ **is immediately identical with** his **transformation of the socio- political system** or Other. Hence, according to Žižek, we can analyse the institutional embodiments of this Other using psychoanalytic categories. In Chapter 4, we saw Žižek’s resulting elision of the distinction between the (subjective) Ego Ideal and the (objective) Symbolic Order. **This leads him to analyse our entire culture as a single subject–object,** whose perverse (or perhaps even psychotic) structure is expressed in every manifestation of contemporary life. Žižek’s decisive political- theoretic errors, one substantive and the other methodological, are different (see Figure 5.1)

The *substantive problem* is to equate any political change worth the name with the total change of the subject–object that is, today, global capitalism. This is a type of change that can only mean equating politics with violent regime change, and ultimately embracing dictatorial government, as Žižek now frankly avows (*IDLC* 412–19). We have seen that the ultra- political form of Žižek’s criticism of everyone else, **the theoretical Left and** the **wider politics**, is that **no one is sufficiently radical for him** – even, we will discover, Chairman Mao. We now see that **this is because Žižek’s model of politics** proper **is modelled on** a pre- critical analogy with the total transformation of a subject’s entire subjective structure, at the end of the talking cure. For what could the concrete consequences of this governing analogy be?

We have seen that **Žižek equates the individual** fantasy **with** the **collective identity of an entire people.** The social fantasy, he says, structures the regime’s ‘inherent transgressions’: at once subjects’ habitual ways of living the letter of the law, and the regime’s myths of origin and of identity. **If political action is modelled on the Lacanian cure, it must involve the complete ‘traversal’** – in Hegel’s terms, the abstract versus the determinate negation – **of** all these **lived myths**, practices and habits. Politics must involve the periodic founding of entire new subject–objects. Providing the model for this set of ideas, the fi rst Žižekian political subject was Schelling’s divided God, who gave birth to the entire Symbolic Order before the beginning of time (*IDLC* 153; *OB* 144–8).

But **can the political theorist reasonably** hope or **expect** that **subjects will simply give up on all their inherited ways**, myths and beliefs, all in one world- creating moment? And can they be legitimately asked or expected to, on the basis of a set of ideals whose legitimacy they will only retrospectively see, after they have acceded to the Great Leap Forward? And **if they do not** – for Žižek laments that today subjects are politically disengaged in unprecedented ways – **what means can the theorist and his allies use to move them to do so?**

### Politics K

#### The use of terms like “paralyzed”, “retarded”, “dumb”, “crippled”, “blind”, and “deaf” are unacceptable, and reinforce exclusion and oppression; the use of this terminology must be rejected

Mandolin ‘8 (Wheelchair Dancer, “On Making Argument: Disability and Language”, <http://www.amptoons.com/blog/2008/04/28/on-making-argument-disability-and-language-by-wheelchair-dancer/>, mg)

We all use disablist or ableist metaphorical language, and I bet most of us say something that is potentially offensive every day: we might be blind to this, deaf to that, pass disabled vehicles, chat about being paralyzed in a situation, etc., etc. I’m often uncomfortable with it — I never use the moron or cretin words — but, honesty here, I do say idiot. I never say, “that’s lame;” I almost never say blind, deaf, paralyzed, cripple, but I occasionally I find myself saying, “that’s dumb,” with full negative rhetorical force. Most of the time, if I slip up the non-disableds I’m with don’t notice; however, the disableds get it, call me on it, and we talk. If you are feeling a little bit of resistance, here, I’d ask you to think about it. If perhaps what I am saying feels like a burden — too much to take on? a restriction on your carefree speech? — perhaps that feeling can also serve as an indicator of how pervasive and thus important the issue is. As a community, we’ve accepted that commonly used words can be slurs, and as a rule, we avoid them, hopefully in the name of principle, but sometimes only in the name of civility. Do you go around using derivatives of the b\*ch word? If you do, I bet you check which community you are in…. Same thing for the N word. These days, depending on your age, you might say something is retarded or spastic, but you probably never say that it’s gay. I’d like to suggest that society as a whole has not paid the same kind of attention to disabled people’s concerns about language. By not paying attention to the literal value, the very real substantive, physical, psychological, sensory, and emotional experiences that come with these linguistic moves, we have created a negative rhetorical climate. In this world, it is too easy for feminists and people of colour to base their claims on argumentative strategies that depend, as their signature moves, on marginalizing the experience of disabled people and on disparaging their appearance and bodies. Much of the blogosphere discourse of the previous weeks has studied the relationships between race, (white) feminism and feminists, and WOC bloggers. To me, the intellectual takeaway has been an emerging understanding of how, in conversation, notions of appropriation, citation, ironization, and metaphorization can be deployed as strategies of legitimation and exclusion. And, as a result, I question how “oppressed, minoritized” groups differentiate themselves from other groups in order to seek justice and claim authority. Must we always define ourselves in opposition and distance to a minoritized and oppressed group that can be perceived as even more unsavory than the one from which one currently speaks? As I watched the discussion about who among the feminist and WOC bloggers has power and authority and how that is achieved, I began to recognise a new power dynamic both on the internet and in the world at large. Feminism takes on misogyny. The WOC have been engaging feminism. But from my point of view, a wide variety of powerful feminist and anti-racist discourse is predicated on negative disability stereotyping. There’s a kind of hierarchy here: the lack of awareness about disability, disability culture and identity, and our civil rights movement has resulted in a kind of domino effect where disability images are the metaphor of last resort: the bottom, the worst. Disability language has about it a kind of untouchable quality — as if the horror and weakness of a disabled body were the one true, reliable thing, a touchstone to which we can turn when we know we can’t use misogynistic or racist language. When we engage in these kinds of argumentative strategies, we exclude a whole population of people whose histories are intricately bound up with ours. When we deploy these kinds of strategies to underscore the value of our own existence in the world, we reaffirm and strengthen the systems of oppression that motivated us to speak out in the first place.

**BAUDRILLARD HAS NO EVIDENCE AND NO DEFENSE OF IGNORING THE EVIDENCE CONTRARY TO HIS THEORIES OF THE MASSES AND COMMUNICATION IN THE POLITICAL**

Andy **Robinson. 2004**. [<http://andyrobinsontheoryblog.blogspot.com/2004/11/baudrillard-zizek-and-laclau-on-common.html>, political theorist and activist]

**Baudrillard sometimes substitutes his own views for evidence, as when he discusses what "we" the audience experience** (GW 39).

Baudrillard's claim that the masses are "dumb", silent and conduct any and all beliefs (SSM 28) and "the reversion of any social" (SSM 49) is problematised by the persistence of subcultures and countercultures, while his claim that any remark could be attributed to the masses (SSM 29) hardly proves that it lacks its own demands or beliefs. He is leaping far too quickly from the confused and contradictory nature of mass beliefs to the idea that the masses lack - or even reject - meaning per se. He wants to portray the masses as disinterested in meaning, instinctual and "above and beyond all meaning" (SSM 11), lacking even conformist beliefs (87-8) and without a language of their own (22). This is contradicted by extensive evidence on the construction of meaning in everyday life, from Hoggart on working class culture to Becker, Lemert, Goffman and others on deviance. Even in the sphere of media effects, the evidence from research on audiences, such as Ang on Dallas viewers and Morley on the Nationwide audience, suggests an active construction of meaning by members of the masses, negotiating with or even opposing dominant codes of meaning. This may well show a decline of that kind of meaning promoted by the status quo - but it hardly shows a rejection of meaning per se. When the masses act stupid, it may well be due to what radical education theorists term "reactive stupidity" - an adaptive response to avoid being falsified and "beaten" by acting stupid. Baudrillard again wrongly conflates the dominant system with meaning as such. Indeed, Baudrillard seems to have changed his mind AGAIN by the time of the Gulf War essays, when he refers to the MEDIA, not the masses, as in control (GW 75), and to stupidity as a result of "mental deterrence" (GW 67-8), which produces a "suffocating atmosphere of deception and stupidity" (GW 68) and a control through the violence of consensus (GW 84). Baudrillard's view that the masses respond to official surveys and the like in a tautological way (SSM 28) may well be true, without proving what Baudrillard claims it does about the absence of meaning in the masses. The attitudes of subaltern groups towards dominant beliefs has often taken such forms throughout history, but this does not preclude the parallel existence of what Jim Scott terms "hidden transcripts" - a parallel set of beliefs with a separate structure of meaning which are not compromised by power. Baudrillard does not dig deep enough into evidence on mass culture to assess whether such transcripts exist or not. He simply assumes the omnipotence of the official, "public" system of meaning. Further, his claim that what passes through the masses leaves no trace (SSM 2) is very problematic, as his claim that the masses are the negation of all dominant meanings (SSM 49).

**There are some very strange 'proofs' in Baudrillard's work: for instance, the claim that people don't believe the myths they adopt rests on the statement that to claim the opposite is to accuse the masses of being stupid and naive** (SSM 99-100). He does not explain why we should not believe this - especially since he elsewhere calls them "dumb like beasts"! **Occasionally, Baudrillard acknowledges evidence against his approach: namely, the research of the "two-step flow" theorists on audience effects, and also the kind of syncretic resistances analysed by Scott, which resist the dominant social system and reinterpret or "recycled" its messages towards different codes and ends, often linked to earlier social forms** (SSM 42-3). However, **he does not dwell on such evidence. This, he says, is simply a different issue, unrelated to the question of the MASSES as "an innumerable, unnameable and anonymous group" operating through inertia and fascination (SSM 43-4). Attempts to recreate meaning at the periphery are a "secondary" matter** (SSM 103-4).

**BAUDRILLARD’S POLITICS END IN A CONSERVATISM AND MEDIA SPIN THAT DRIVES THE WORLD TOWARDS WORLD WARS.**

Andy **Robinson. 2004.** Political Theorist and Activist. <http://andyrobinsontheoryblog.blogspot.com/2004/11/baudrillard-zizek-and-laclau-on-common.html>

The problem is further complicated by **Baudrillard's** vague claim that something passes between the masses and terrorism (SSM 52-3), which seems to imply that isolated terrorist acts can somehow transform overnight the entire structure of meaning by rendering representation impossible and meanings reversible (SSM 54, 116), and which is also based on a definition of terrorism which is so restricted that it rules out virtually all actual "terrorists" and which Baudrillard admits (116) does not fit the identities of the Baader-Meinhof group, the one example he gives. His **politics results directly from the artificial grimness of his analysis of popular beliefs, since it involves a radical subjectlessness and a random blow against victims who are punished for being nothing** (SSM 56-7). Like Zizek, **he calls for the suicidal destruction of one's own perspective** (SSM 69-70), **and denounces everything short of this as strengthening the system** (SSM 72). Furthermore, **his model of social change, which rests on the inevitability of implosive catastrophe (SSM 61), has no room for any human intervention. It simply assumes that another reality lies beyond our own perspective which can be reached in this way, but which is presently blocked by our way of thinking** (SSM 104). Baudrillard substitutes "logical exacerbation" and "catastrophic revolution" for alternatives (SSM 106), and locates the frontier of struggle at the level of "production of truth" (SSM 123). The progressive side of this struggle seems to involve unknowability and fascination. **The lack of alternatives seriously blunts Baudrillard's critical force, and can even lead to conservative positions, such as portraying manipulation of the media as better than pursuing truth** (GW 46).

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### Environment

**Constructing scenarios of environmental destruction is necessary to prevent global apocalypse – the alt ensures continued complacence in the face of ecological collapse**

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)

It is no longer a question that human interaction with the world is destroying the very ecosystems that sustain life1. Nevertheless, **within academic communities people are divided over which discursive tactic, ontological position, or strategy for activism should be adopted.** I contend that **regardless of an ecocritic’s particular orientation** that **ecocriticism most effectively produces change when it doesn’t neglect the tangible reality that surrounds any discussion of the environment**. **This demands including human-induced ecocidal violence within all our accounts. Retreating from images of ecological collapse to speak purely within inner-academic or policymaking circles isolates our conversations away from the rest of the world—as it dies before our eyes**. This is not to argue that interrogating people’s discourse, tactics, ontological orientation, or anything else lacks merit. Timothy Luke, Chair and Distinguished Professor of Political Science at the Virginia Polytechnic Institute, explains that Because nothing in Nature simply is given within society, such terms must be assigned significance by every social group that mobilizes them[.] ... Many styles of ecologically grounded criticism circulate in present-­‐day American mass culture, partisan debate, consumer society, academic discourse, and electoral politics as episodes of ecocritique, contesting our politics of nature, economy, and culture in the contemporary global system of capitalist production and consumption. (1997: xi) Luke reminds us that regardless of how ecocritics advance their agenda they always impact our environmental awareness and therefore alter our surrounding ecology. In doing so he shows that both literal governmental policies and the symbolic universe they take place within reconstruct the discourses utilized to justify policy and criticism in the first place. This is why films like *The Day After Tomorrow* and *2012* can put forth realistic depictions of government response to environmental apocalypse. And despite being fictional, these films in turn can influence the reality of governmental policy. Even the science-­‐fiction of weather-­‐controlling weapons are now only steps away from becoming reality2. **Oftentimes it takes images of planetary annihilation to motivate people into action after years of sitting idly by watching things slowly decay. In reality it takes awareness of impending disaster to compel policymakers to enact even piecemeal reform.** On the screen it takes the actual appearance of ecological apocalypse to set the plot in motion. What is constant is that “as these debates unfold, visions of what is the good or bad life ... find many of their most compelling articulations as ecocritiques ... [that are] mobilized for and against various projects of power and economy in the organization of our everyday existence” (Luke 1997: xi). **We cannot motivate people to change the ecological conditions that give rise to thoughts of theorization without reference to the concrete environmental destruction ongoing in reality**. This means that, **even when our images of apocalypse aren’t fully accurate, our use of elements of scientifically-­established reality reconstructs the surrounding power structures in beneficial ways.** **When we ignore either ecological metaphors or environmental reality we only get part of the picture**.` In recent years, **many ecocritics have shied away from the very metaphors that compel a sense of urgency**. They have largely done so **out of the fear that its deployment will get co-opted by hegemonic institutions**. **Such critics** ignore how what we advocate alters our understanding of ourselves to the surrounding ecology. In doing so, our advocacies **render** such **co-optation meaningless because of the possibility to redeploy our metaphors in the future.** In the upcoming sections, I will provide an overview of how poststructuralist thinkers like Michel Foucault and Martin Heidegger influence some ecocritics to retreat from omnicidal rhetoric. This retreat minimizes the main objectives of their ecocriticism. I argue that **rather than withdrawing from images of apocalypse that we should utilize them in subversive ways to disrupt the current relationship people have to their ecology.** Professor of Sociology at York University, Fuyuki Kurasawa argues that **“instead of bemoaning the contemporary preeminence of a dystopian imaginary ... it can enable a novel form of transnational socio-political action ... that can be termed preventive foresight. .**.. [I**]t is a mode of ethico-political practice enacted by participants** in the emerging realm of global civil society ... [by] **putting into practice a sense of responsibility for the future by attempting to prevent global catastrophes**” (454-­‐455**). By understanding how metaphors around the environment operate we can better utilize discourse to steer us away from the brink of apocalypse. The alternative of abandoning apocalyptic deployments is far worse.** Put simply, **“by minimizing the urgency or gravity of potential threats, procrastination appears legitimate**” (Kurasawa 462). In the final section of my essay, I outline how **ecocritics can utilize images of omnicide to motivate the evolution of successful tactics that can slow the pace of environmental destruction.**

### Ontology

**Debates about ontology are irrelevant to real world policy debates – pragmatism is more effective at facilitating social change**

David **McClean. 2001**. philosopher, writer and business consultant, conducted graduate work in philosophy at NYU. “The cultural left and the limits of social hope” http://www.american-philosophy.org/archives/past\_conference\_programs/pc2001/Discussion%20papers/david\_mcclean.htm

There is a lot of philosophical prose on the general subject of social justice. Some of this is quite good, and some of it is quite bad. What distinguishes the good from the bad is not merely the level of erudition**. Displays of high erudition are gratuitously reflected in much of the writing by those,** for example, **still clinging to Marxian ontology and is often just a useful smokescreen which shrouds a near total disconnect from empirical reality. This kind of political writing likes to make a lot of references to other obscure, jargon-laden essays and tedious books written by other true believers** - the crowd that takes the fusion of Marxian and Freudian private fantasies seriously. Nor is it the lack of scholarship that makes this prose bad. Much of it is well "supported" by footnotes referencing a lode of other works, some of which are actually quite good. Rather, **what makes this prose bad is its utter lack of relevance to extant and critical policy debates, the passage of actual laws, and the amendment of existing regulations that might actually do some good for someone else. The writers of this bad prose are too interested in our arrival at some social place wherein we will finally emerge from our "inauthentic" state into something called "reality."** Most of this stuff, of course, comes from those steeped in the Continental tradition (particularly post-Kant). **While that tradition has much to offer and has helped shape my own philosophical sensibilities, it is anything but useful when it comes to truly relevant philosophical analysis**, and no self-respecting Pragmatist can really take seriously the strong poetry of formations like "authenticity looming on the ever remote horizons of fetishization**." What Pragmatists see instead is the hope that we can fix some of the social ills that face us if we treat policy and reform as more important than Spirit and Utopia.**