# 1AC

### 1AC – Plan

#### The Executive Branch of the United States should acquire electricity from small modular nuclear reactors for mission critical military installations in the United States.

### 1AC – Heg Advantage

#### CONTENTION 1: HEG

**Scenario 1---Cyber-terrorism**

**Cyber-attack is coming ---actors are probing grid weaknesses**

**Reed 12** 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", 10/11, 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.

**Grid attacks take out C and C---causes retaliation 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.

**Plan solves grid collapse---SMRs make bases resilient and deters attack**

**Andres and Breetz 11** Richard B, 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 L, doctoral candidate in the Department of Political Science at The Massachusetts Institute of Technology, February, "Small Nuclear Reactors for Military Installations: Capabilities, Costs, and Technological Implications", www.ndu.edu/press/lib/pdf/StrForum/SF-262.pdf

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 failure wrecks US hegemony**

**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.

**Hegemony prevents extinction**

**Barnett 11** (Thomas P.M., Former Senior Strategic Researcher and Professor in the Warfare Analysis & Research Department, Center for Naval Warfare Studies, U.S. Naval War College American military geostrategist and Chief Analyst at Wikistrat., worked as the Assistant for Strategic Futures in the Office of Force Transformation in the Department of Defense, “The New Rules: Leadership Fatigue Puts U.S., and Globalization, at Crossroads,” March 7 <http://www.worldpoliticsreview.com/articles/8099/the-new-rules-leadership-fatigue-puts-u-s-and-globalization-at-crossroads>)

Events in Libya are a further reminder for Americans that we **stand at a crossroads in our continuing evolution as the world's sole full-service superpower**. Unfortunately, we are increasingly seeking change without cost, and shirking from risk because we are tired of the responsibility. We don't know who we are anymore, and our president is a big part of that problem. Instead of leading us, he explains to us. Barack Obama would have us believe that he is practicing strategic patience. But many experts and ordinary citizens alike have concluded that he is actually beset by strategic incoherence -- in effect, a man overmatched by the job. 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.

#### Scenario 2: HAWAII

#### Hawaiian military installations are dependent on oil imports and vulnerable to supply disruptions --- SMRs solve

Butler and Rice 10 Lt. Col Glen, Marine officer and director, operations and training, at Marine Corps Base Hawaii and Col Robert D, commanding officer at Marine Corps Base Hawaii, "The Nuclear Option", November, www.armedforcesjournal.com/2010/11/4847032/

Beyond these limitations and the obvious “doing the right thing” aspect of traditional renewable energy, another reason — the key reason — for the military to consider nuclear energy on our installations is to strengthen national security. President Obama, former National Security adviser James Jones and other political and military leaders have said energy security is national security. If this is true, then our bases and stations — so largely reliant on external power sources — are at risk, and there is much work to be accomplished.¶ The elephant in today’s energy room is the fact that many military communities rely disproportionately on foreign oil for energy. Hawaii is a prime example, a state strategically located in the middle of the Pacific (and where the military passed tourism last year as the No. 1 economic source), yet a state with the highest dependence in the nation on fossil fuels — approximately 90 percent, mostly from Indonesian oil.¶ To achieve the kind of energy independence — and thus security — our leaders are calling for requires much more than compact fluorescent light bulbs, photovoltaic panels, biofuel plants and wind farms. Nuclear energy is a promising, yet rarely mentioned, option.¶ Of course, the U.S. is not the only country striving for energy advancements. China, India, Brazil, Japan, South Korea, France and many other nations, including our adversaries, are ambitiously moving forward with renewable — and yes, nuclear — power production. France generates almost 80 percent of its power from nuclear energy. Some sources indicate that the nuclear energy sector is likely to grow to a trillion-dollar market by 2030.¶ This means there will be growing international competition to provide this energy source. American entrepreneurs understand the nature of this competition, too. Bill Gates identified nuclear power as one attractive avenue while discussing energy and climate issues. He specifically mentioned new technology he was investing in — developing nuclear technology that ran on its own waste. However, recognizing the lack of apparent interest and expertise in the U.S., he acknowledged that he’s been looking to Russia, India and China for ideas.¶ SMALL MODULAR REACTORS¶ While fears of nuclear energy remain, some forward thinkers are pressing on and helping emerging technology to gain momentum. Small Modular Reactors (SMRs) are being developed by several companies and offer attractive energy options for military installations. These reactors are defined by the Department of Energy (DoE) as “nuclear power plants that are smaller in size [300 megawatts or less] than current generation base load plants [1,000 megawatts or higher]. These smaller, compact designs are factory-fabricated reactors that can be transported by truck or rail to a nuclear power site … ‘modular’ ... refers to a single reactor that can be grouped with other modules to form a larger nuclear power plant ... [they] require limited on-site preparation ... [and will be] ‘plug and play.’”¶ Although acquiring SMRs might remain fiscally prohibitive for individual bases, there are ways to make this option feasible. U.S. Rep. Jim Marshall inserted text into the fiscal 2010 National Defense Authorization Act that directed the defense secretary to “conduct a study to assess the feasibility of developing nuclear power plants on military installations ... summarize options available to the Department to enter into public-private partnerships or other transactions for the construction and operation of the nuclear power plants; estimate the potential cost per kilowatt-hour and life-cycle cost savings to the Department; consider the potential energy security advantages of generating electricity on military installations through the use of nuclear power plants.”

#### Energy independence’s key to base security and effectiveness --- SMRs make them self-sufficient

Hemmings 10 Fred, Senator of Hawaii, "Fueling the Technological Revolution", 3/17, archives.hawaiireporter.com/story.aspx?8e00fd08-dc61-45ff-bc2e-ec0bf746574a

As you know, unlike solar or wind, nuclear energy is available 24/7. During nonpeak demand periods, nuclear energy can be used to produce electricity for electric automobiles. I submit to you that this could be one of the greatest job creation opportunities this country has seen in a long time…to retool the American auto industry from fossil fuel engines to electric engines, bypassing the currently popular hybrids. This would create many new jobs. Other benefits are profound… no emissions, no noise. Some would say that batteries are a problem, but this is where economies of scale come in. Most of us remember early cell phones from 25 years ago. They were big and cumbersome because of the size of the batteries. Economies of scale are such that once we have a demand in the marketplace to mass produce batteries; technologies will develop the ability to make car batteries smaller, durable and lasting. History has shown this to be true over and over again…it is the magic of the marketplace.¶ It is a important to mention that energy independence is a geopolitical necessity. Gasoline costing $5 or $6 dollars per gallon is not impossible in the near future. National leaders and the Defense Department worry that the destruction of foreign oil fields or the mining of the Straits of Hormuz would bring America to its knees economically simply because of the resulting high price of fuel. Energy independence, through nuclear energy, is a geopolitical necessity. Of course another key benefit of nuclear energy is a clean environment. Positive incentives for nuclear energy development could replace punitive taxes.. The fastest way to reduce carbon emissions is with clean, safe, nuclear energy. SMRs will help clean up the environment.¶ Unfortunately, in the past a vocal minority has stymied nuclear development. In Hawaii, extremists want to stop nuclear energy even while our state probably has the largest concentration of nuclear reactors of any place in the world …… 17 nuclear submarines call Pearl Harbor home!¶ Across our nation, SMRs would create independent energy grids which could be interconnected as needed. Just think….no system wide blackouts. In Hawaii that means that Pearl Harbor, which is very vulnerable, along with our Marine, Air Force and Army bases, could be energy independent. SMRs offer many other opportunities. They are safer, use recycled nuclear material, are easy to transport, buried underground and easily replenished.¶ Small modular reactors also offer the opportunity to provide energy for desalination plants where safe potable water is lacking. This has tremendous possibilities for remote locations across America and throughout the world.¶ I started by saying that in this room there exists the leadership to make nuclear energy a reality sooner than later. It is important to recognize that the Nuclear Regulatory Commission (NRC), while operating under archaic laws, has done its job well. It is imperative that the NRC works with political leaders and consumers to expedite reform so that the permitting processes for both large nuclear plants and SMRs can be fast tracked. If it currently takes hundreds of millions of dollars and 8 to 10 years to get a permit, we must double or triple NRC funding so that they have the manpower and assets needed to significantly reduce permitting time to, at the most, two to three years. As France and other countries have done, America must recycle nuclear waste which could eliminate 90% of the waste stream. We must also use our nation's greatest asset…the creative marketplace…. to allow private sector investors to start developing better ways to recycle nuclear waste rather than continuing to argue about storage sites. Congress must amend laws to allow NRC to not only allow recycling but to facilitate it.¶ I see the day as early as 2025 where there are no internal combustion engines for autos and electric cars are whizzing through our cities with no noise or pollution. In the future there will be no huge generating plants burning fossil fuels. Companies such as GM, Chrysler and Ford will once again be worldwide leaders in transportation industries because our nation has the electricity necessary to make electric cars a reality. No longer will we be exporting hundreds of billions of dollars to foreign nations for fossil fuels. SMRs could make our nation's military bases independent and secure. Though we have challenges, I believe that energy independence and the expansion of nuclear energy industries, especially with small modular reactors, will revolutionize America. You can make it happen. Thank you.

#### Hawaii’s the lynchpin of US deterrence and influence in Asia --- hosts Pacific Command and sustains regional missile defense

Jon Letman 12, Foreign Policy in Focus, “Hawaii: Head of the Tentacled Beast”, http://www.fpif.org/articles/hawaii\_head\_of\_the\_tentacled\_beast

Fresh from hosting the Asia-Pacific Economic Cooperation (APEC) summit in Honolulu last autumn, U.S. President Barack Obama recently told members of the Australian Parliament that America’s defense posture across the Asia-Pacific would be “more broadly distributed…more flexible—with new capabilities to ensure that our forces can operate freely.” ¶ The announcement of America’s “Asia-Pacific pivot” by its first Hawaiia-born president was highly fitting, since the Hawaiian Islands are at the piko (“navel” in Hawaiian) of this vast region. ¶A less flattering metaphor for Hawaii’s role in the Pacific is what Maui educator and native Hawaiian activist Kaleikoa Kaeo has called a giant octopus whose tentacles reach across the ocean clutching Japan, Okinawa, South Korea, Jeju island, Guam—and, at times, the Philippines, American Samoa, Wake Island, Bikini Atoll, and Kwajalein Atoll in the Marshall Islands.¶ The head of this beast is in Hawaii, which is home to U.S. Pacific Command (PACOM), with sonar, radar, and optical tracking stations as its eyes and ears. Its brain consists of the supercomputers on Maui and the command center on Oahu that connects PACOM to distant bases. This octopus excretes waste as toxic land, polluted waters, abandoned poisons, blown-up and sunken ships, and depleted uranium (DU). Like a real octopus that can regenerate severed limbs, the military in the Pacific grows in new locations (Thailand, Australia) and returns to old ones (Philippines, Vietnam).¶ PACOM headquarters at Camp H.M. Smith on Oahu is a short drive from Waikiki Beach, but it’s unlikely many tourists pause to consider that tensions between the United States and Russia over missile defense, the war in Afghanistan, the destruction of Iraq, the use of drones in Libya, Somalia, Yemen, Pakistan, and the Philippines—as well as growing opposition to military bases in Okinawa, Guam and Jeju—are all linked to Hawaii.¶ Thirty-six nations— and over half the world’s population—live in PACOM’s “Area of Responsibility” which spans from the Bering Strait to New Zealand, as far west as Pakistan and Siberia and east to the Galapagos. This behemoth’s self-proclaimed duty is to defend “the territory of the United States, its people, and its interests,” and to “enhance stability in the Asia-Pacific,” “promote security cooperation, encourage peaceful development, respond to contingencies, deter aggression and, when necessary, fight to win.”¶ Sovereignty violated¶ Hawaii’s relationship with the U.S. military was cemented on January 16, 1893, when U.S. Marines overthrew what had been a sovereign kingdom recognized by the United States and dozens of countries around the world. Encouraged by Anglo-American subjects of the Hawaiian kingdom seeking tariff-free access to American markets for their sugar cane, the U.S. military—pursuing what was then already a mission of expansion in the Pacific—toppled Queen Liliuokalani, making way for the 1898 U.S. declaration of the Territory of Hawaii and, in 1959, statehood.¶ In 1900, President Theodore Roosevelt said, “I wish to see the United States the dominant power on the shores of the Pacific Ocean.” He and every president since have understood the importance of Hawaii in fulfilling that goal. “Our future history will be more determined by our position on the Pacific facing China than by our position on the Atlantic facing Europe,” Roosevelt said.¶ Since even before World War II, but especially since the 1947 establishment of PACOM, Hawaii has been at the center of testing, training, and deployment of U.S. military hardware and personnel around the region. Today Hawaii is home to 118 military sites, from the Pacific Missile Range Facility on Kauai to Kaena Point Satellite Tracking Station on Oahu, from the Air Force Maui Optical and Supercomputing observatory to the Pohakuloa Training Area on the Big Island (Hawaii Island).¶ Besides Hawaii’s four largest islands, the military has used smaller Hawaiian islands and offshore islets for live-fire testing for decades. Best known is Kahoolawe, which was a bombing range from 1941 until 1990 when, after more than a dozen years of protests and legal challenges, President George H.W. Bush ordered a cessation to bombing and the removal of unexploded ordnances. Yet as of 2004, one-quarter of Kahoolawe still had unexploded ordnances and was considered “unsafe.”¶ On Hawaii Island, at 133,000 acres, Pohakuloa Training Area (PTA) is over four times the size of Kahoolawe. The high-altitude site between the volcanoes Mauna Loa and Mauna Kea has been used by all branches of the military for small arms training, mortar firing, and other live-fire tests.¶ In addition to being shelled with millions of rounds of ammunition annually—and on the receiving end of 2,000-pound inert bombs dropped from B-2 bombers—PTA is contaminated with an undetermined amount of depleted uranium (DU). In 2008, the Hawaii County Council voted 8-1 for a resolution calling for a halt to live-fire training until further assessments and clean-up can be conducted. The military, however, continues to exploit the site, according to Jim Albertini with the Malu Aina Center for Non-violent Education & Action.¶ Below PTA, in the sleepy town of Hilo, community advocate Lori Buchanan describes Pohakuloa today: “It’s so disheartening to drive past and see the degradation to the land. What I see will bring tears to your eyes—not only animals with no place to go, but dust storms reminiscent of Kahoolawe because of the erosion and impact of military training.” She says the bombing doesn’t make sense. “Why would you bomb the hell out of the land when it’s so limited? We live on an island…and they’re bombing a huge area, making it a wasteland.”¶ Although a native Hawaiian, Buchanan says she isn’t instinctively anti-military. “It’s the whole patriotic [thing]. It’s ingrained in us. We understand the importance of defense—no one is challenging that, but is all this really necessary? You cannot kill your own resources when you live on an island and have nowhere to go once you’ve killed everything off.”¶ “It isn’t just Pohakuloa. It’s Kahoolawe, Makua, Barking Sands, the proposed training on Maui and it’s Kalaupapa,” says Buchanan, talking about Kalaupapa peninsula, on the island of Molokai. Kalaupapa is a quiet place, best known for its 19th-century leprosy colony at the bottom of Hawaii’s highest sea cliffs. Less well known is that Kalaupapa and “topside” (upper) Molokai are used by the Navy for confined area and field carrier landing “touch-and-go” training by CH-53D helicopters, the type used in Afghanistan. In July 2012, activists on Molokai helped thwart plans to increase night training exercises for the controversial MV-22 Osprey and Huey attack helicopters from 112 takeoff and landings per year to 1,388.¶ The Navy plans to base two squadrons (12 aircraft each) of Osprey and one squadron of light attack H-1 Cobra and Huey attack helicopters in Hawaii. The Osprey, which takes off like a helicopter but can fly like an airplane, has been heavily criticized over safety concerns following at least seven fatal crashes—including two this year, in Florida and Morocco. Osprey helicopters have been used in Afghanistan, Iraq, and Libya, and they’re being deployed in Japan and Okinawa despite fervent protests. ¶ In addition to concerns about some 2,000 new active-duty personnel and their dependents being transferred to Oahu, civic and cultural groups are worried about the impacts of the aircraft on local communities, wildlife, and historically and culturally sensitive areas on Kalaupapa, which is designated a U.S. National Historic Park. The military has said the increased training will have “no significant impact on noise levels for most communities,” but local groups wedged between high cliffs, mountains, and the sea fear otherwise. ¶ Under my thumb ¶ An Asia-Pacific pivot will increase testing and training beyond what has taken place in Hawaii for years—from live-fire testing in Makua Valley on Oahu to missile defense, rocket, and drone testing at the Pacific Missile Range Facility on Kauai. Additionally, every two years, the U.S. military holds its Rim of the Pacific (RIMPAC) training—the “world’s largest international maritime exercise,” which was most recently held this summer across the islands. ¶ RIMPAC 2012 included 22 regional allies (including Canada, Japan, Australia, South Korea) and more distant nations like Colombia, Netherlands, Tonga, India, and Russia. Notably absent was China, but in September 2012, U.S. Secretary of Defense Leon Panetta announced that Beijing would be invited to participate in a limited capacity in the 2014 exercise.¶ Retired U.S. Army Colonel Ann Wright sees RIMPAC and the growing number of multi-national joint military “exercises and engagements” in the region as an opportunity for the United States to test (and show off) its next generation of weaponry: laser-fueled, computerized, and submarine-launched drones. It’s also a chance to closely assess regional capabilities while positioning the United States to more effectively “push around” other countries and persuade them to do the foreign policy and military operational bidding of the United States, Wright says.¶ Wright, who resigned in protest of the 2003 invasion of Iraq, points to the South Korean naval base on Jeju which, when finished, will house AEGIS-equipped destroyers linked to U.S. missile defense as an example of how the United States pressures its allies to follow certain paths.¶ Speaking at a Pentagon news briefing last June, PACOM commander Admiral Samuel J. Locklear basically said the same thing: “We’re not really interested in building any more U.S. bases in the Asia-Pacific,” he said. “We shouldn’t have to at this point in time. We have reliable partners and reliable allies, and together we should be able to find ways to—not only bilaterally, but in some cases to multilaterally—to be able to find these locations where we can put security forces that respond to a broad range of security issues.”¶ “It’s complicated”¶ Much has been made of the Asia-Pacific pivot, but Oahu activist Kyle Kajihiro of Hawaii Peace & Justice says this is just the most recent wave in a series of endless waves. ¶ “Every pivot needs a fulcrum in order to turn. Hawaii was the first fulcrum for U.S. in the Pacific and has allowed it to leverage their power to greater effect,” he says. Kajihiro points out that questions of land use and the military’s social, cultural, and environmental impacts on Hawaii are frequently overlooked or sidelined by the notion that seemingly endless infusions of money and military-based employment always trump the needs of people and the environment.¶ For decades the military has enjoyed solid backing from Hawaii’s congressional delegation in Washington, the Hawaii Chamber of Commerce, and unions with construction interests. Hawaii’s own population, which overwhelmingly votes Democratic, has largely accepted what Kajihiro calls “the dominant myth” that a large military presence is organic, inevitable, and naturally beneficial. He refers to events like “Military Appreciation” month and the USS Arizona Memorial at Pearl Harbor, where he says militarism and war are monumentalized as forms of “redemptive violence”—that is, as a source of goodness, honor, and valor from which the United States always emerges “stronger and better.”¶ In Hawaii, the military has widespread local support, even from some native Hawaiians (whose kingdom was overthrown), people of Japanese descent (who have suffered discrimination and internment) and others whose ancestral homelands have born the brunt of the U.S. military (Koreans, Okinawans, Chamorro, Pacific Islanders).¶ “When you’re severely addicted to something like the military,” asks Kajihiro, “how do you transition away without causing trauma?” He says Hawaii would face serious economic hemorrhaging if it turned away from the military cold turkey. “How do we plan for and invest in an alternate course that will take us off an addictive substance that deteriorates the body to a more diversified, healthy economic sustenance?”¶ Hawaii is a remote archipelago almost wholly dependent on imported oil, commodities and manufactured goods, but increasingly its people are recognizing the need to become more self-reliant, especially in terms of local food production. ¶ In the last decade Hawaii has seen a mushrooming of businesses and educational efforts to pursue alternative energy based on sun, wind, waves and waste. Author Richard Heinberg, a senior fellow in residence at the Post Carbon Institute, has suggested Hawaii should move in a direction like New Zealand, which places very little emphasis on military strength but has become a global leader in environmental conservation.¶ Under the banner of an “Asia-Pacific pivot,” the United States is positioning its military to secure access to remaining resources and drive the economic and political winds of the region, but it also demonstrates that it understands the importance of finding alternatives to building large, new bases that rely on increasingly hard-to-obtain money and oil.

#### North Korea missile threat high

Yi 1-2 – Dr. Xiaoxiong Yi is the director of Marietta College’s China Program. January 2nd, 2013, "North Korea nuclear and missile development a clear and present danger" [www.lancastereaglegazette.com/article/20130102/OPINION04/301020014/North-Korea-nuclear-missile-development-clear-present-danger?nclick\_check=1](http://www.lancastereaglegazette.com/article/20130102/OPINION04/301020014/North-Korea-nuclear-missile-development-clear-present-danger?nclick_check=1)

North Korea is going nuclear rapidly.¶ A year into his rule, Kim Jong-un, 30, the grandson of the Kim Dynasty, has not only written North Korea’s nuclear status into the country’s constitution, but also led the Hermit Kingdom one major step closer to a full-blown nuclear-armed state.¶ Since 1998, North Korea has already developed short- and medium-range missiles and stockpiled enough weapons-grade plutonium for half a dozen nuclear bombs. **Pyongyang’s successful launch of a long-range missile in December 2012 has turned a hypothetical nuclear power into an emerging reality**.¶ As Kim Jong-un was giving himself a nice year-end present to mark the first anniversary of his succession to power in the secretive country, **North Korea’s leap forward in mid-December clearly demonstrated that the up-and-coming “North Korea 3.0” is on a** credible path to further developing its intercontinental ballistic missile capabilities, capable of reaching the shores of Alaska and Hawaii**.**¶The South Korean government has issued an official warning that the North has developed rockets that can reach the U.S. mainland. “Based on our analysis and simulation,” South Korea Defense Ministry announced on Dec. 23, “the missile is capable of flying more than 10,000 kilometers (6,200 miles) with a warhead of 500-600 kilograms.”¶ But Kim Jong-un and his generals still seem unsatisfied with their recent missile launch success. Satellite photos indicate North Korea is already in a **“state of readiness” for its third nuclear test** at the Punggye-ri nuclear test facility.¶ Pyongyang conducted its first and second atomic explosions in 2006 and 2009. A third nuclear test would fit a pattern. “North Korea is thought to have enough plutonium for a handful of crude atomic bombs, and unveiled a uranium enrichment facility in 2010,” according to Hong Kong-based South China Morning Post, “but it must continue to conduct tests to master the miniaturization technology crucial for a true nuclear weapons program. Rocket and nuclear tests unnerve Washington and its allies because **each new success puts North Korean scientists another step closer to perfecting a nuclear warhead small enough to put on a missile that could hit the United States.**”¶ The three generations of Kims have been no strangers to nuclear brinkmanship, but Kim the grandson’s latest series of actions is qualitatively different. With North Korea’s long-range missile launch conducted on Dec. 12, and a simultaneous preparation for the third underground nuclear test, Kim Jong-un seems to be betting all his chips on getting the world’s recognition as a nuclear power and ultimately, a reunification of the Korean Peninsula by force and under his terms.¶ “Kim is fighting for a place in the nuclear club,” writes Shim Jae Hoon of New York Times, “and by doing so, will have the power to demand the withdrawal of American troops from the South. North Korea has not given up the ambition of reunifying the peninsula under its dominance, just as Vietnam was reunified under Hanoi’s control. Through repeated nuclear tests, the North seeks to make its nuclear weapons program a fait accompli.”¶ Kim Jong-un’s North Korea may be a friendless nation, but it certainly got the world’s attention last month when it sent its long-range missile into space.¶ A dictatorial and unpredictable regime is now preparing for another nuclear explosion for a true nuclear weapons program. What are the implications for the U.S. and its allies?¶ Since the Clinton administration, Washington has repeatedly stated the United States “will not tolerate nuclear weapons in North Korea.”¶ For the United States and its two key allies in Asia, Japan and South Korea, it will be a mistake to assume that they can continue to do business as usual with Pyongyang. “North Korea’s military provocations have revealed weaknesses of the U.S. and its alliance partners’ military readiness,” says Dr. Ryo Hinata-Yamaguchi at the Center for Strategic and International Studies in Washington.¶ “A more expansive strategy is needed to deter North Korea. The United States, Japan, and South Korea now must work together to show the North Koreans that playtime is over.”

#### Hawaiian-based missile defense solves

YOCHI J. DREAZEN 9, WSJ, “U.S. Fortifies Hawaii to Meet Threat From Korea”, June 19, http://online.wsj.com/article/SB124535285705228571.html

The U.S. is moving ground-to-air missile defenses to Hawaii as tensions escalate between Washington and Pyongyang over North Korea's recent moves to restart its nuclear-weapon program and resume test-firing long-range missiles.¶ Defense Secretary Robert Gates said on Thursday that the U.S. is concerned that Pyongyang might soon fire a missile toward Hawaii. Some senior U.S. officials expect a North Korean test by midsummer, even though most don't believe the missile would be capable of crossing the Pacific and reaching Hawaii.¶ Mr. Gates told reporters that the U.S. is positioning a sophisticated floating radar array in the ocean around Hawaii to track an incoming missile. The U.S. is also deploying missile-defense weapons to Hawaii that would theoretically be capable of shooting down a North Korean missile, should such an order be given, he said.¶ "We do have some concerns if they were to launch a missile...in the direction of Hawaii," Mr. Gates said. "We are in a good position, should it become necessary, to protect American territory."

#### North Korea will blackmail the US absent missile defense --- causes war

Peter Huessy 9, Senior Defense Consultant Associate at the National Defense University Foundation (NDUF) and President of GeoStrategic Analysis, “Missile Defense in the Age of Nuclear Proliferation”, inFocus, http://www.jewishpolicycenter.org/1527/missile-defense-nuclear-proliferation

The Iranians are developing missiles with ranges in excess of 2,400 kilometers, and are seeking to develop **an intercontinental missile capability**, which the United States Air Force predicts will be completed by 2015. Tehran also has successfully tested a two-stage rocket that placed a satellite in orbit. This is a common precursor to developing an ICBM (intercontinental ballistic missile) capability.¶ North Korea now lags behind Iran in domestic rocket capabilities. Its last test of a long-range rocket only successfully completed two stages. If the third stage were to work, Pyongyang could land a 300 to 500 kilogram warhead on the United States. And while the West might experience relief over these apparent failures, it should be noted that Iranian technicians have been identified at North Korean launch facilities, marking a **strong symbiotic relationship and the potential for technical cooperation**. The Russians and Chinese also assist both rocket programs.¶ In the case of Iran, current assessments indicate that the Mullahs are developing nuclear devices to fit onto its 2,000 to 2,400 kilometer range Shahab missiles. This is a development of the utmost significance. The Islamic Republic could **fit a small nuclear device onto a short or medium range missile**, and launch it from a freighter just 300 kilometers off the coast of North Carolina, for example. Indeed, as Investors Business Daily reports, "the Iranians have tested a sophisticated nuclear warhead design that lets them pack a nuclear warhead into a smaller package able to fit nicely on the Shahab-3 and other Iranian missiles."¶ Analysts are also concerned about the threat of an electro-magnetic pulse (EMP) attack. Such an attack would involve detonating a nuclear device 20 to 70 miles above a major metropolitan area. The blast would destroy every computer and electronic device within sight of the blast. This would destroy refrigerators, cars, phones, and more. It would, in effect, set the city back more than one hundred years, technologically speaking, and effectively destroy its economy. The ripple effect of just one EMP attack, both through economic and technological mayhem, could **cripple the rest of the country.**¶ The conventional wisdom is that Iran does not have the technology to launch an EMP attack on the U.S. However, the EMP Commission, chartered by Congress earlier this decade, judged that such an attack was very possible. Indeed, Iran tested a Scud-type missile off of a barge in the Caspian Sea in the mid 1990s. The Missile Defense Agency (MDA) also conducted a test off the coast of Hawaii in recent years to prove to a skeptical intelligence community that it could be done. Even as far back as 1998, the Commission on Ballistic Missile Threats to the United States concluded that an EMP type attack ranked among the more likely missile threats to the United States.¶ Defending Against the Threat¶ While the U.S. currently has the technological capability to protect our costal regions from shorter-range attacks, such as from a freighter, to do so would **require many more platforms**. Systems such as the Aegis, the THAAD, and Patriot have proven to be effective in this capacity. But our current inventory needs to be expanded, as sufficient deployments around the country would deprive other regions from protection. Enhancement of the long-range interceptors deployed in Alaska and California must also be part of any defense package that seeks to deal with this threat, since an EMP threat can come from Scuds or ICBMs. As such, the U.S. Congress and the Administration should accelerate the acquisition and deployment of additional missile defense systems, as part of a global and layered capability to protect the U.S. and its allies.¶ In the absence of such defenses, North Korea and Iran or even Russia and China, will find it easier to **blackmail, coerce, or bully the U.S. or its allies.** U.S. military power is not the reason we are being threatened by the likes of Pyongyang and Tehran. It is that their terrorist and hegemonic goals can **only succeed if American power is overcome**. As Jeffrey Kuhner, President of the Edmund Burke Institute, wrote in The Washington Times:¶ Moscow and Peking have not abandoned their rivalry with the West… they are part of an alliance that aims to curtail and undermine American power. They have provided… support to Stalinist North Korea… They have sold vital missile and nuclear technology to Iran's apocalyptic mullahs. The are constantly obstructing the global war against terror."¶ Responding to the Critics¶ It is remarkable that after nearly half a century, even as the threats have gathered, critics of missile defense continue to oppose its deployment. They are wedded to the ambiguous strategy of "engagement and negotiations" with our enemies, primarily because they view U.S. policies as the root of the problem—most prominently represented by our liberation of Afghanistan and Iraq. In their view, if the United States is coerced into "staying at home," all the better.¶ The consequences of such a policy are grave. With no missile defenses for the U.S. homeland, **we can be** blackmailed successfully in any confrontation **with a state that has long-range missiles in its possession**. For example, we might be powerless to confront North Korea if it chose to resort to aggression against South Korea.¶ How should the U.S. prepare for this scenario? Taking no precautions will almost certainly embolden an aggressive actor like North Korea. But, **a preemptive attack is also fraught with danger**. Such an attack could leave Los Angeles and Pyongyang in ashes.¶ The answer lies in the deployment of effective missile defenses in any theater. Effective missile defenses give the President and the Pentagon the ability to strike launch sites in North Korea, for example, without necessarily sparking a wider conflict. More to the point, such defenses could also **intercept North Korean rockets** against our forces in the South China Sea, the Sea of Japan, South Korea, and Japan, for example.

#### Causes nuclear escalation and extinction

Chol 11 Kim Myong Chol is author of a number of books and papers in Korean, Japanese and English on North Korea, including Kim Jong-il's Strategy for Reunification. He has a PhD from the Democratic People's Republic of Korea's Academy of Social Sciences "Dangerous games" Aug 20 www.atimes.com/atimes/Korea/MH20Dg01.html

The divided and heavily armed Korean Peninsula remains the most inflammable global flashpoint, with any conflict sparked there likely to become a full-blown thermonuclear war involving the world's fourth-most powerful nuclear weapons state and its most powerful. ¶ Any incident in Korea by design, accident, or miscalculation could erupt into a devastating DPRK-US war, with the Metropolitan US serving as a main war theater. ¶ Rodong Sinmun warned on August 16: "The Korean Peninsula is faced with the worst crisis ever. An all-out war can be triggered by any accident." ¶ Recent incidents illustrate the real danger of miscalculation leading to a total shooting war, given the volatile situation on the Land of Morning Calm. ¶ 1. The most recent case in point is the August 10 shelling of North Korea by the South. Frightened South Korea marines on Yeonpyeong Island mistook three noises from a North Korean construction site across the narrow channel for artillery rounds, taking an hour to respond with three to five artillery rounds. ¶ The episode serves as a potent reminder to the world that the slightest incident can lead to war. A reportedly malfunctioning firefinder counter-artillery radar system seems to partly account for the panicky South Korean reaction. ¶ South Korean conservative newspaper the Joong Ang Daily reported August 17: ¶ "A military source said that radar installed to detect hostile fire did not work last week when North Korea fired five shots toward the Northern Limit Line (NLL), the disputed maritime border, on Aug 10. ¶ "'We must confirm the location of the source of the firing through the ARTHUR (Artillery Hunting Radar) and HALO (hostile artillery location) systems, but ARTHUR failed to operate, resulting in a failure to determine the source of the fire,' said the source." ¶ BBC reported on November 25 last year the aggressive nature of troops on the South Korea-held five islands in North Korean waters. ¶ "Seen in this sense, they (five islands including Yeonpyeong Island) could provide staging bases for flanking amphibious attacks into North Korea if South Korea ever takes the offensive." ¶ 2. An almost catastrophic incident took place at dawn on June 17 near Inchon. South Korean marines stationed on Gyodong Island near Inchon Airport fired rifles at a civilian South Korean jetliner Airbus A320 with 119 people aboard as it was descending to land, after mistaking it for a North Korean military aircraft. ¶ The Asiana Airlines flight was carrying 119 people from the Chinese city of Chengdu. ¶ About 600 civilian aircraft fly near the island every day, including those flying across the NLL, but they face a perennial risk of being misidentified as a hostile warplane. ¶ It is nothing short of a miracle that the Airbus A320 was not hit and nobody harmed. ¶ 3. On March 26, 2010, the high-tech South Korean corvette Sokcho fired 130 rounds at flocks of birds, mistaking them for a hostile flying object. The innocent birds looked like a North Korean warplane just at a time when an alleged North Korean midget submarine had managed to escape with impunity after torpedoing the hapless Cheonan deep inside security-tight South Korean waters. ¶ The South Korean military's habit of firing at the wrong target increases the risk of an incident running out of control. ¶ CNN aired a story December 16, headlined: "General: South Korea Drill Could Cause Chain Reaction." ¶ F/A-18 pilot-turned Marine Corp General James Cartwright told the press in the Pentagon, "What we worry about, obviously, is if that it [the drill] is misunderstood or if it's taken advantage of as an opportunity. ¶ "If North Korea were to react to that in a negative way and fire back at those firing positions on the islands, that would start potentially a chain reaction of firing and counter-firing. ¶ "What you don't want to have happen out of that is ... for us to lose control of the escalation. That's the concern." ¶ Agence France-Presse on December 11 quoted former chief of US intelligence retired admiral Dennis Blair as saying that South Korea "will be taking military action against North Korea". ¶ New Korean war differs from other wars¶ Obama and the Americans seem to be incapable of realizing that North Korea is the wrong enemy, much less that a new Korean War would be fundamentally different from all other wars including the two world wars. ¶ Two things will distinguish a likely American Conflict or DPRK-US War from previous wars. ¶ The first essential difference is that the US mainland will become the main theater of war for the first time since the US Civil War (1861-1865), giving the Americans an opportunity to know what it is like to have war fought on their own land, not on faraway soil. ¶ The US previously prospered by waging aggressive wars on other countries. Thus far, the Americans could afford to feel safe and comfortable while watching TV footage of war scenes from Afghanistan, Iraq, Pakistan and Libya as if they were fires raging across the river. ¶ The utmost collateral damage has been that some American veterans were killed or returned home as amputees, with post traumatic stress disorder, only to be left unemployed and homeless. ¶ However, this will no longer be the case. ¶ At long last, it is Americans' turn to have see their homeland ravaged.¶ An young North Korea in 1950-53 was unable to carry the war all the way across the Pacific Ocean to strike back, but the present-day North Korea stands out as a fortress nuclear weapons state that can withstand massive American ICBM (Intercontinental ballistic missile) attacks and launch direct retaliatory transpacific strikes on the Metropolitan USA. ¶ The second essential difference is that the next war in Korea, that is, the American Conflict or the DPRK-USA War would be the first actual full-fledged nuclear, thermonuclear war that mankind has ever seen, in no way similar to the type of nuclear warfare described in science fiction novels or films. ¶ North Korea is unique among the nuclear powers in two respects: One is that the Far Eastern country, founded by legendary peerless hero Kim Il-sung, is the first country to engage and badly maul the world's only superpower in three years of modern warfare when it was most powerful, after vanquishing Nazi Germany and Imperial Japan. ¶ The other is that North Korea is fully ready to go the length of fighting [hu]mankind's first and last nuclear exchange with the US. ¶ The DPRK led by two Kim Il-sungs - the ever-victorious iron-willed brilliant commander Kim Jong-il and his heir designate Kim Jong-eun - is different from Russia under Nikita Khrushchev which backed down in the 1962 Cuban missile crisis. ¶ Khrushchev and his company never fought the Americans in war. As a rule, most countries are afraid to engage the Americans. As the case is with them, North Korea is the last to favor war with the Americans. ¶ However, it is no exaggeration to say that the two North Korean leaders are just one click away from ordering a retaliatory nuclear strike on the US military forces in Guam, Hawaii and metropolitan centers on the US mainland. ¶ On behalf of Supreme Leader Kim Jong-il, Kim Jong-eun will fire highly destructive weapons of like Americans have never heard of or imagined to evaporate the US. ¶ The North Koreans are too proud of being descendents of the ancient civilizations of Koguryo 2,000 years ago and Dankun Korea 5,000 years ago, to leave the Land of morning Calm divided forever with the southern half under the control of the trigger-happy, predatory US. The North Koreans prefer to fight and die in honor rather than kowtow to the arrogant Americans. ¶ At the expense of comforts of a better life, North Koreans have devoted more than half a century to preparing for nuclear war with the Americans. All available resources have been used to convert the whole country into a fortress, including arming the entire population and indigenously turning out all types of nuclear thermonuclear weapons, and developing long-range delivery capabilities and digital warfare assets. ¶ An apocalyptic Day After Tommorow-like scenario will unfold throughout the US, with the skyscrapers of major cities consumed in a sea of thermonuclear conflagration. The nuclear exchange will begin with retaliatory North Korean ICBMs detonating hydrogen bombs in outer space far above the US mainland, leaving most of the country powerless. ¶ New York, Washington, Chicago, San Francisco and major cities should be torched by ICBMs streaking from North Korea with scores of nuclear power stations exploding, each spewing as much radioactive fallout as 150-180 H-bombs.

### 1AC – New

#### CONTENTION 2: RADAR

#### Space radar is infeasible due to power limitations --- nuclear’s key

McCall 6 Chair, USAF Scientific Advisory Board, “Spacecraft Bus Technoligies,” http://www.au.af.mil/au/awc/awcgate/vistas/stechch3.pdf

All current spacecraft are either power limited or restricted in some measure by inadequate electrical power. Power limitations impose restrictions on the communications and propulsion subsystems and currently make large space-based radars and space-based weapons **relatively** unfeasible. A revolutionary change in capabilities will result from power technologies capable of providing large amounts of power onboard satellites. Large amounts of power will be enabling on spacecraft in the same sense that large amounts of random access memory have been enabling in personal computers. If power is not an issue, then previously hard applications become easy and new applications become possible. Evolutionary development of solar-array-based power technologies will see improvements to tens of kilowatts on satellites over the next decades. However, all solar collection systems in Earth orbit are limited by the solar constant of 1.4 kiloWatts per square meter. Large powers from solar collectors require large collection areas. For substantially larger powers (> 100 kW), several different types of technologies will have to be explored. Powers of this level will make large space-based radars, space-based directed energy weapons, and the use of high-performance electrically driven maneuvering technologies possible. **A natural technology to enable high power is nuclear power in space**; however, this technology has to date been considered unacceptable due to political and environmental limitations. Thus it is desirable to develop other technologies that may provide large power levels in space. In addition to continued development of safe **nuclear** systems, two other sources of continuous power in space that should be explored are the concepts of electrodynamic power-generating tethers and power beaming from one location to another (e.g., from space to space). The development of these and other technologies for high continuous power **will have a revolutionary effect** and the Air Force should invest in these areas as well as continuing to invest in solar collection technologies. Over the years, there have been several programs in nuclear powered spacecraft. NASA has been using Radioisotope Thermoelectric Generators (RTGs) for the interplanetary missions that generate a few tens of watts of power. Russia has flown nuclear reactors in space and BMDO has a joint program with the Russians (TOPAZ), under which the Defense department bought three of the reactors to do laboratory experiments. DoE had a program (SP 100) to use nuclear power in space and the Air Force had a nuclear propulsion program; these programs have been canceled. Nuclear power, however, remains one of the attractive alternatives in generating large amounts of power in space. To build a reactor for space applications has many challenging technical aspects including development of high-temperature lightweight materials, active cooling technologies, extremely radiation-hard and high-temperature electronics, and fail-safe system architectures. Setting the emotional issues of nuclear power aside, this technology offers a viable alternative for large amount of power in space. The Air Force should continue efforts towards making a safe nuclear reactor in space a viable option. Existing joint programs with Russia offer a low cost alternative and should be pursued. To build a reactor for space applications has many challenging technical aspects including development of high-temperature lightweight materials, active cooling technologies, extremely radiation-hard and high-temperature electronics, and fail-safe system architectures. Setting the emotional issues of nuclear power aside, this technology offers a viable alternative for large amount of power in space. The Air Force should continue efforts towards making a safe nuclear reactor in space a viable option. Existing joint programs with Russia offer a low cost alternative and should be pursued.

#### SMR development solves---allows the Air Force to deploy space radar

Maybury 12 Dr. Mark T, Chief Scientist, United States Air Force, 1/31/12, “Energy Horizons: United States Air Force Energy S&T Vision 2011-2026,” <http://www.fas.org/irp/doddir/usaf/energy.pdf>

There are other breakthrough space energy generation component technologies with the potential of achieving up to 70% efficiency. Examples include quantum dots and dilute nitrides in solar cells. But there are also entirely new technologies such as tethers to attempt to harvest energy from the geomagnetic field, and energy harvesting from system heat waste. These ideas, as well as new developments in nuclear energy, including small modular reactors, can potentially fuel local facilities. ¶ Recently, there has been progress in developing large systems for energy generation, including very large deployable panels as developed by the Air Force Research Lab (AFRL), DARPA, and industry. For example, we are currently limited to 27 kW arrays for satellite power, whereas more power is required for some future space missions by the AF, National Security Space (NSS), and NASA. Employing larger and more efficient arrays will enable missions that require very high power, such as space-based radar or space-based laser missions. An example of a system that is almost ready for a flight demonstration is the AFRL-Boeing 30 kW Integrated Blanket Interconnect System (IBIS). Figure 3.2 shows the technology and implementation concept for such a High Power Solar Array (HPSA). In the long term, increased solar cell efficiencies and revolutionary materials foreshadow the potential of 500 kW on-orbit power generation technologies, which would be transformational for performing missions from spacebased systems. ¶ In addition to improving photovoltaic efficiencies, other potential energy production is possible in the mid- to far-term. In addition to modern designs for autosafing, small modular nuclear reactors for ground operations energy, nuclear energy has been demonstrated on several satellite systems (e.g., Radioisotope Thermoelectric Generators (RTG)). This source provides consistent power regardless of harvestable resources (i.e. solar) at a much higher energy and power density than current technologies. While the implementation of such a technology should be weighed heavily against potential catastrophic outcomes, many investments into small modular reactors can be leveraged for space based systems. As these nuclear power plants decrease in size, their utility on board space based assets increases.

#### It will be deployed---Air Force wants to, they just need the tech

Puiu 12 Tibi Puiu – Studies Mechanical Engineering, Feb 23, 2012 “Air Force plans buildings a solar power station in space and nuclear-powered spacecraft”

http://billionyearplan.blogspot.com/2012/08/air-force-plans-buildings-solar-power.html

Last week, the U.S. Air Force released a report in which it outlines its technological and energy plans for the forthcoming 15 years. Among others, the Air Force means to deploy a space-based solar power station, which would serve energy wirelessly to both Earth and space satellites, as well as a new generation of spacecraft powered by small nuclear reactors.¶ This solar power satellite design features sets of lightweight, inflatable fresnel reflectors to focus the Sun's energy on small arrays of high-efficiency photovoltaic cells. (c) NASA¶ The 72-page long report, titled “Energy Horizons: United States Air Force Energy S&T Vision 2011-2026″, can be read in its entirety for thus curious enough here. It discusses measures the institution plans to meet in order to reach its energy goals, reduce demand and change military culture in sight of rapidly developing missions.¶ “Energy is a center of gravity in war and an assured energy advantage can enable victory,” said Mark Maybury, chief scientist for the United States Air Force. He spearheaded the report.¶ “While energy is already an essential enabler,” Maybury said. “Global competition, environmental objectives and economic imperatives will only increase its importance.”¶ Of great interest, is a solar-based power station, which would harness solar energy and then beam it to Earth using lasers. The technology necessary to effectively transfer energy between space and Earth isn’t available at the moment, however, so my guess is the Air Force has in mind distributing it towards satellites, whether they belong to the Air Force, NASA or other national security agencies. Air Force is currently limited to 27 kilowatt (kW) arrays for satellite power. In the future, it intends to massively increase its space energy array, which would also allow them to build smaller spacecraft, as they wouldn’t need to generate power for themselves. Also, sensors, communications equipment and on-board processing devices generally require a lot of energy, and if you want to have a very powerful satellite, destined for space-based radar or space-based laser missions, you need to provide it somehow. It would all be wireless transmitted from the neighboring space power station.¶ Nuclear-powered spacecraft¶ When nuclear energy is concerned, there are already some satellites powered by Radioisotope Thermoelectric Generators (RTG), which provide steady and reliable power, at a much greater output than other technologies currently in place. However, the Air Force wants to take it up a notch and employ satellites powered by small nuclear reactors. We’ve discussed about nuclear fission power plants, small enough to fit in a briefcase, in one of our past posts – I’m guessing the Air Force is going for something similar. Of course, safety is a major concern, as outlined in the report.

#### Only nuclear power solves

Downey 4 James R, Lt. Col, US Air Force, et al., April 2004, “FLYING REACTORS: THE POLITICAL FEASIBILITY OF NUCLEAR POWER IN SPACE,” http://www.fas.org/nuke/space/downey.pdf

Military space missions generally cannot be scaled up or down in order to move from one power option to another. For example, space based radar sensors require a continuous power source of greater than 100kWe to provide space sensors with the ability to generate sufficient radiant energy to map the earth’s surface, as well as to transmit data with the reliability required under wartime conditions. Therefore, with currently available technologies, space based ground mapping radar will require SNP, and alternatives such as fuel cells or solar energy will not suffice for mission requirements. Nevertheless, DOD’s opponents do contend that missions might be accomplished without space resources altogether. This results in choosing the option of not launching at all rather than risking a military mission with fissile material in orbit.

[SNP = space nuclear power]

#### Space radar is the key internal link to maintaining nuclear primacy

Li & Nie 9 – Li Bin, director of Arms Control Program at the Institute of International Studies, Tsinghua University; and Nie Hongyi, officer in the People’s Liberation Army with an MA from China’s National Defense University and a Ph.D. in International Studies from Tsinghua University, 5/22/9, “An Investigation of China – U.S. Strategic Stability,” <http://www.ucsusa.org/assets/documents/nwgs/Li-and-Nie-translation-final-5-22-09.pdf>

The mobility of China’s nuclear weapons raises the survivability of Chinese nuclear weapons and thereby sustains China-U.S. strategic stability. If the United States cannot accept a condition of strategic stability between China and the United States, then a simple increase in the number of nuclear weapons targeting China (for example, moving nuclear subs) cannot achieve that objective, but requires an increase in the ability to sense, discriminate and track mobile targets. The visible light and the infrared sensors on U.S. satellites can partially serve this objective. But in clouds and rain the light seen by infrared and visible light sensors have no way to penetrate the cloud layer to see targets on the ground. For this reason the United States hopes to develop an all-weather capability to observe the ground. The specified plan is to develop a satellite-based radar system utilizing the Doppler reflection to follow moving targets on the ground. According to this plan the United States will begin to deploy a space-based radar network in 2008. If the U.S. space-based radar can effectively realize the functions of this idea then they will be able to detect, recognize and track the large body of Chinese strategic mobile missiles. This will greatly discount the effort of China to mobilize its strategic weapons, and a new strategic imbalance will appear between China and the United States. Analysis makes it clear that if China selects an appropriate countermeasure to space-based radar it would be difficult to track Chinese mobile missiles in all weather, making it unable to realistically lower China’s nuclear retaliatory capability. The problem is that the ability of space-based radar to track mobile objects on the ground is a product of adjustments in the movement that are sensitive to the environment (such as terrain), the path followed by mobile objects on the ground and other factors. Consequently, once the United States deploys a space-based radar system, it will not be easy for China to know if its mobile missiles are being tracked; it will also not be easy for the United States to know if the Chinese mobile missiles they’re tracking already escaped tracking. This increases difficulties for decision-makers on both sides.

#### It enables effective reconnaissance to ensure primacy over mobile targets

Li 7 Bin, director of Arms Control Program at the Institute of International Studies, Tsinghua University, “Tracking Chinese Strategic Mobile Missiles,” Science and Global Security, Vol. 15, p. 1-30

Long-range weapons can be divided into two categories: nuclear and nonnuclear. ICBMs and SLBMs are two main long-range nuclear weapons. The United States has deployed ICBMs and SLBMs for several decades and these weapons, in principle, are able to attack mobile targets if the targets are located, although the costs may be high. The question is whether or not conventional weapons are able to attack mobile targets from long distances. As conventional weapons have a much smaller lethal radius, they must be very precise to hit the target.¶ To attack mobile or re-locatable targets, real-time intelligence systems are also required as an adjunct to weapons in order to locate and track mobile targets.¶ For many years, the United States has employed satellite-based optical and infrared sensors that observe ground targets with a resolution of sub-meters. The optical and infrared observation capabilities from space have been applied in recent warfare and proved to be strategically important. However, the detection of optical and infrared signals is not always possible. Darkness precludes the use of optical signals and heavy clouds can shield both optical and infrared signals. To ensure persistent monitoring all-weather systems are needed. One idea is to detect the targets on the ground by satellite based radar. Radar can penetrate clouds and rain, and space radar is an ideal alternative. The main question is whether space radar can provide persistent tracking. This study uses the DF-31 as the example and assumes that it can move on standard roads at 20 km/h (5.6 m/s), the limit set by the Chinese government for transportation vehicles on level IV roads in uneven areas. 36 In the ﬁrst mobility mode analyzed in the previous section, the survivability of DF-31 increases when its speed increases. In that analysis the author examined the DF-31 TELs at speeds of 20 km/h and higher to see if a higher speed helps China saturate a U.S. preemptive strike. In the mode analyzed next, higher speeds of DF-31 TELs make them more visible to space radar when the radar monitors moving ground targets. Therefore the author examines a case in which the DF-31 TELs are at low speed (20 km/h). ¶ Research in the United States has explored the roles of using space radar to track Chinese mobile missiles. 37 Space radar detects targets on the ground or in the air by sending radar waves to targets and picking up reﬂected signals. To reach the same level of resolution, the size of the radar antenna needs to be much larger than the size of the telescope that picks up infrared and optical signals as the radar wavelength (e.g., several centimeters for X-band) is much larger than optical and infrared signals (10−4 to 10−5 centimeters). Satellites in space cannot carry large radar antenna to achieve such a high resolution. An alternative is to pick up a reﬂected radar wave at different positions when the satellite is traveling and piece the picture together from coherent signals. Radar working in this mode is called a Synthetic Aperture Radar (SAR). Spacebased SAR is good for taking pictures of nearly stationary targets, for example, mapping the terrain. To highlight moving targets, the Doppler effects of radar waves are utilized. If a beam of a radar wave is projected to a moving target with radial speed (speed in the direction of the radar beam), the frequency of the radar wave reﬂected from the moving target changes slightly. A larger radial speed creates larger frequency shift. Space radar can pick up only the signals from moving targets whose frequency is slightly different from that from stationary targets. This mode of detection is called Ground Moving Target Indicator (GMTI) or Surface Moving Target Indicator (SMTI). When space radar is operated in SMTI mode, all stationary objects in the ﬁeld become dark and only moving targets with appropriate radial speed are bright. Space radar in SMTI mode is the primary available tool to monitor mobile targets and therefore is the main candidate for tracking Chinese strategic mobile missiles. This analysis will focus mainly on space radar in SMTI mode.

#### Nuke primacy prevents nuclear war over Taiwan

Lieber and Press 7 - Keir A. Lieber, Assistant Professor of Political Science at the University of Notre Dame, and Daryl G. Press, Associate Professor of Political Science at the University of Pennsylvania, Winter 2007, “U.S. Nuclear Primacy and the Future of the Chinese Deterrent,” China Security, Issue No. 5, online: http://www.wsichina.org/cs5\_5.pdf

Ironically, one of the clearest explanations for how the United States may use nuclear primacy in a crisis or war with China appears in an earlier article by Blair. His recent article with Chen labels our suggestion that the United States might use nuclear threats “the zenith of provocation” and “unthinkable.”23 However, in the autumn 2005 issue of China Security, Blair describes exactly the crisis dynamics we envision leading to U.S. nuclear threats and perhaps even a preemptive nuclear attack. He notes that if China were to alert its strategic nuclear forces during a war with the United States over Taiwan, “the United States would likely act to beat China to the punch.” He continues, “Given constant U.S. surveillance of Chinese nuclear launch sites, any major Chinese preparations to fire peremptorily would be detected and countered by a rapid U.S. preemptive strike against the sites by U.S. conventional or nuclear forces… The United States could easily detect and react inside of the lengthy launch cycle time of Chinese forces.”24¶ Blair’s words mirror our argument and suggest the two ways that nuclear primacy may benefit the United States. First, if the Chinese were to threaten nuclear escalation in the context of a Taiwan war, the U.S. could strike first and likely destroy the Chinese force on the ground – “beat China to the punch,” as Blair puts it. Second, China’s knowledge of its vulnerability to nuclear preemption might prevent China from alerting its nuclear force – or even attacking Taiwan – in the first place.

War over Taiwan is inevitable---U.S. conventional superiority ensures China will escalate

Zhang 8 - Baohui Zhang, Associate Professor of Political Science, Lingnan University, Hong Kong, March 2008, “The Taiwan Strait and the Future of China's No-First-Use Nuclear Policy,” Comparative Strategy, Vol. 27, No. 2, p. 164-182

For the above reasons the no-first-use principle remained unchallenged until the 1990s, when a series of new issues began to force some in China to rethink its nuclear principles. These include the ascendance of the Taiwan issue as the central security challenge for China (and, as a result, the increased likelihood of American military intervention in the Taiwan Strait), and the revolution in military affairs (RMA) that has given the United States vast conventional advantage over China. ¶ According to John Wilson Lewis and Xue Litai, during the 1990s Taiwan's tendency to move toward de jure independence led to an increasingly pessimistic view inside China that the Taiwan issue could not be peacefully resolved. More and more Chinese analysts believed that, due to the internal political dynamics of a democratic Taiwan and the rise of Taiwanese identity among its people, peaceful reunification between Taiwan and the mainland has become increasingly hopeless.13 In fact, Jiang Zemin made the famous remark that “a war across the Taiwan Strait is unavoidable.”14 As a result, Taiwan has become the number-one security issue for China, and preparing for a war to prevent Taiwan's independence has become an obsession of the Chinese leadership and military.¶ The problem for China is that it also increasingly believes that American military intervention can be expected in the event of war in the Taiwan Strait. Inside the Chinese military, due to “America's proclaimed geostrategic interests and recent military actions the prevailing opinion was that U.S. forces would undoubtedly intervene.”15 This scenario presents an extremely daunting challenge: how to defeat the world's most powerful military. This task is particularly daunting since the Chinese military recognizes that the revolution in military affairs has given the United States vast advantages over China. According to military observers, the 1991 Gulf War and the 1999 NATO war against Serbia demonstrated the revolutionary change in warfare through the use of precision-guided weapons linked to information technologies in areas such as intelligence, command and control, and weapon guidance. The Chinese military was keenly aware of the new trend and organized systematic studies of how the American military conducted its operations in this new kind of war.16¶ In fact, the Chinese military was awed by the American dominance in conventional warfare. As observed by General Wang Baocun, a prominent strategist at the PLA Academy of Military Sciences, the U.S. revolution in military affairs has resulted in a new kind of gap with other countries. Previously, the gap was merely generational. This time, there is a “time gap” in that the U.S. military and others are fighting as if they were from different historical periods. According to Wang, “The time gap in military technologies allows the superior side to possess an absolute advantage while leaving the other side in a position of absolute disadvantage. … The time gap makes it impossible for developing countries to overcome their military disadvantage in confrontations with the United States.” Wang thus reaches a gloomy conclusion: “The military time gap results in serious threats to the national and military security of developing countries. In fact, they are almost in a defenseless situation.”17¶ Major General Xu Hezhen, who is the Commandant of PLA Army Command Academy in Shijiazhuang, suggests that the RMA allows the U.S. to conduct “no-contact combat” against other militaries through beyond visual range sensor technologies and precision-strike weapons. This revolution in combat “creates a battlefield situation where 'I can see you and hit you but you can't see me and hit back. The situation leaves the weaker side in a position of perpetual disadvantage until it loses the will of resistance.”18¶ The RMA thus presents a serious problem for China's military planners: how to defeat a technologically far superior enemy such as the United States. In fact, China is no longer confident it can defeat such an enemy due to the vast gap with the United States in conventional military technologies. As Lewis and Xue observe, “As senior PLA planners dissected the American strategy from the Gulf War of 1991 to the lightening war against Iraq in 2003, it was to become painfully evident that no war with the United States could be won or even brought to a reasonable draw.”19¶ This bleak assessment by Chinese officers of the U.S. conventional dominance in the Taiwan Strait is echoed by American analysis. In a research project for the U.S. Department of Defense, the Rand Corporation analyzed how China may choose to conduct a war against the American military. According to Rand, in the coming decades the U.S. will possess “even greater military advantages over Chinese forces than it currently enjoys.”20 Therefore, if the China intends to fight the U.S. through conventional military modernization, “this option, taken alone, potentially condemns the PLA to evolving relative obsolescence.”21¶ How to prevent a disastrous defeat in the Taiwan Strait led some in China to question the separation of conventional and nuclear doctrines in Chinese military thinking. While the no-first-use policy can prevent a nuclear attack against China, it cannot deter a large-scale conventional war by a technologically superior enemy. Some believe that the policy can no longer protect China's core national interests, such as preventing de jure independence of Taiwan. According to Alastair Iain Johnston, who was the first Western analyst to notice this trend in the 1990s, some Chinese strategists began to argue that China should develop a nuclear doctrine “suitable for economically and technologically weak states.”22

#### Nuclear war

Glaser 11 Professor of Political Science and International Affairs – George Washington University, “Will China’s Rise Lead to War?” *Foreign Affairs* Vol. 9 Iss. 2, March/April

THE PROSPECTS for avoiding intense military competition and war may be good, but growth in China's power may nevertheless require some changes in U.S. foreign policy that Washington will find disagreeable--particularly regarding Taiwan. Although it lost control of Taiwan during the Chinese Civil War more than six decades ago, China still considers Taiwan to be part of its homeland, and unification remains a key political goal for Beijing. China has made clear that it will use force if Taiwan declares independence, and much of China's conventional military buildup has been dedicated to increasing its ability to coerce Taiwan and reducing the United States' ability to intervene. Because China places such high value on Taiwan and because the United States and China--whatever they might formally agree to--have such different attitudes regarding the legitimacy of the status quo, the issue poses special dangers and challenges for the U.S.-Chinese relationship, placing it in a different category than Japan or South Korea. A crisis over Taiwan could fairly easily escalate to nuclear war, because each step along the way might well seem rational to the actors involved. Current U.S. policy is designed to reduce the probability that Taiwan will declare independence and to make clear that the United States will not come to Taiwan's aid if it does. Nevertheless, the United States would find itself under pressure to protect Taiwan against any sort of attack, no matter how it originated. Given the different interests and perceptions of the various parties and the limited control Washington has over Taipei's behavior, a crisis could unfold in which the United States found itself following events rather than leading them. Such dangers have been around for decades, but ongoing improvements in China's military capabilities may make Beijing more willing to escalate a Taiwan crisis. In addition to its improved conventional capabilities, China is modernizing its nuclear forces to increase their ability to survive and retaliate following a large-scale U.S. attack. Standard deterrence theory holds that Washington's current ability to destroy most or all of China's nuclear force enhances its bargaining position. China's nuclear modernization might remove that check on Chinese action, leading Beijing to behave more boldly in future crises than it has in past ones. A U.S. attempt to preserve its ability to defend Taiwan, meanwhile, could fuel a conventional and nuclear arms race. Enhancements to U.S. offensive targeting capabilities and strategic ballistic missile defenses might be interpreted by China as a signal of malign U.S. motives, leading to further Chinese military efforts and a general poisoning of U.S.-Chinese relations.

#### Assessing Chinese motivation is possible and prevents security dilemmas

Joseph K. Clifton 11, “DISPUTED THEORY AND SECURITY POLICY: RESPONDING TO “THE RISE OF CHINA”,” 2011, http://scholarship.claremont.edu/cgi/viewcontent.cgi?article=1164&context=cmc\_theses

First, motives can be known. Mearsheimer is correct in observing that assessing motives can be difficult, but this does not mean that the task is impossible. There clearly are ways of finding out information about the goals of states and the means with which they plan to achieve them. One of the most important roles of intelligence analysts, for example, is to determine state interests and expected behavior based on obtained information. The possibility that information may be flawed should not lead to a rejection of all information. People make decisions based on less than perfect knowledge all of the time. This ability to know motives extends to future motives, because an analyst can use information such as historical trends to observe consistencies or constant evolutions of motives. Prediction of the future is necessarily less certain in its accuracy, but the prediction can still be made.104¶ Second, even if there is still some uncertainty of motives, the rational response is not to assume absolute aggression. Assuming aggressive motive in a situation of uncertainty ignites the security dilemma, which could actually decrease a state’s security. Mearsheimer calls this tragic, but it is not necessary. An illustrative example is Mearsheimer’s analysis of the German security situation were the United States to withdraw its military protection. Mearsheimer argues that it would be rational for Germany to develop nuclear weapons, since these weapons would provide a deterrent, and it would also be rational for nuclear European powers to wage a preemptive war against Germany to prevent it from developing a nuclear deterrent. 105 This scenario is not rational for either side because it ignores motives. If Germany knows that other states will attack if it were to develop nuclear weapons, then it would not be rational for it to develop nuclear weapons. And if other states know that Germany’s development of nuclear weapons is only as a deterrent, then it would not be rational to prevent German nuclear development. The point is that the security dilemma exists because of a lack of motivational knowledge, so the proper response is to try to enhance understanding of motives, not discard motivational knowledge altogether. Misperception is certainly a problem in international politics, but reducing misperception would allow states to better conform to defensive realist logic, which results in preferable outcomes relative to offensive realism. 106¶ Assessing motives is vital in the case of the rise of China, because mutually preferable outcomes can be achieved if China is not an aggressive power, as offensive realism would have to assume, but is actually a status quo power with aims that have limited effect on the security of the U.S. and other potentially affected countries. I do not mean here to claim with certainty that China is and will always be a status quo power, and policymakers likely have access to more intentional information than what is publicly known. At the very least, valuing motivational assessments empowers policymakers to act on this knowledge, which is preferable because of the possibility of reducing competition and conflict.

### 1AC – Solvency

#### CONTENTION 3: SOLVENCY

#### Plan’s solves SMRs in the military -- doesn’t pick winners

Andres and Breetz 11 Richard B, 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 L, doctoral candidate in the Department of Political Science at The Massachusetts Institute of Technology, February, "Small Nuclear Reactors for Military Installations: Capabilities, Costs, and Technological Implications", 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.

#### Military is best at advancing SMRs

Cohen 12 Armond, Executive Director for the Clean Air Task Force, "DoD: A Model for Energy Innovation?", May 21, energy.nationaljournal.com/2012/05/powering-our-military-whats-th.php

Unlike most other agencies, including the Energy Department, the Pentagon is the ultimate customer for the new technology it helps create, spending some $200 billion each year on R&D and procurement. The implications of DoD’s role as customer have not been widely appreciated, as:¶ · DoD, uniquely in government, supports multi-year, billion-dollar “end to end” innovation efforts that produce technology that is continuously tested, deployed and refined on bases and in the field, providing real world feedback that leads to increases in performance and reductions in cost. By contrast, most of the federal government’s civilian energy innovation efforts involve research loosely connected at best with the few commercialization efforts that it supports.¶ · DoD and its contractors know how to bring together multiple innovations to achieve system-level advances leading to big performance gains (examples range from nuclear submarines to unmanned aircraft to large-scale information systems). This systems approach is precisely what is needed to advance clean energy technologies.¶ · Relatively stable, multi-year funding allows the Pentagon to pursue “long cycle” innovation that is necessary for large, capital- intensive technologies and supports a highly capable contractor base that can respond to changing national security demands.¶ · The Pentagon’s scope and budget has allowed it to experiment with new and creative innovation tools such as the well-known Defense Advanced Projects Research Agency, which has produced extraordinary technological breakthroughs; and the Environmental Security Technology Certification Program, which develops and demonstrates cost-effective improvements in environmental and energy technologies for military installations and equipment.¶ · Because of DoD’s size and demands for performance and reliability, it is unique among government and private sector organizations as a demonstration test-bed. Smart-grid technologies and advanced energy management systems for buildings are already poised to benefit from this aspect of the Pentagon’s innovation system.¶ · DoD has collaborated effectively with other federal agencies, including the Department of Energy and its predecessors (for example, to advance nuclear energy technologies). Continuing competition and cooperation between DoD and DOE will spur energy innovation. DoD’s innovation capabilities can enhance U.S. national security, improve U.S. international competitiveness, and spur global energy restructuring and greenhouse gas emissions reductions.¶ At the same time, while providing enormous opportunities to develop and test energy efficiency technologies and small scale distributed energy appropriate to forward bases, the Pentagon is unlikely to become an all-purpose hub for advancing all categories of clean-energy technologies, because its energy innovation activities will be sustainable only where they can support the nation’s defense capabilities.¶ Therefore, many other large-scale technologies that are of great importance to improving the environment, such as carbon-free central station generation or zero carbon transportation, may not as easily fit with DoD’s mission. Possible exceptions might include small modular nuclear reactors that can be used for producing independent, non-grid power at military bases, or, conceivably, zero-carbon liquid fuels other than anything resembling current generation biofuels.¶ In any case, the challenge for military-led energy innovation is to further define and delineate avenues for improved clean-energy performance that are linked to the national strategic mission. History shows that when such linkages are strong, DoD’s innovation capabilities are second to none.

#### SMRs solve nuclear downsides

Ringle 10 John, Professor Emeritus of Nuclear Engineering at Oregon State University, "Reintroduction of reactors in US a major win", November 13, robertmayer.wordpress.com/2010/11/21/reintroduction-of-reactors-in-us-a-major-win/

Small nuclear reactors will probably be the mechanism that ushers in nuclear power’s renaissance in the U.S.¶ Nuclear plants currently supply about 20 percent of the nation’s electricity and more than 70 percent of our carbon-free energy. But large nuclear plants cost $8 billion to $10 billion and utilities are having second thoughts about how to finance these plants.¶ A small modular reactor (SMR) has several advantages over the conventional 1,000-megawatt plant:¶ 1. It ranges in size from 25 to 140 megawatts, hence only costs about a tenth as much as a large plant.¶ 2. It uses a cookie-cutter standardized design to reduce construction costs and can be built in a factory and shipped to the site by truck, railroad or barge.¶ 3. The major parts can be built in U.S. factories, unlike some parts for the larger reactors that must be fabricated overseas.¶ 4. Because of the factory-line production, the SMR could be built in three years with one-third of the workforce of a large plant.¶ 5. More than one SMR could be clustered together to form a larger power plant complex. This provides versatility in operation, particularly in connection with large wind farms. With the variability of wind, one or more SMRs could be run or shut down to provide a constant base load supply of electricity.¶ 6. A cluster of SMRs should be very reliable. One unit could be taken out of service for maintenance or repair without affecting the operation of the other units. And since they are all of a common design, replacement parts could satisfy all units. France has already proved the reliability of standardized plants.¶ At least half a dozen companies are developing SMRs, including NuScale in Oregon. NuScale is American-owned and its 45-megawatt design has some unique features. It is inherently safe. It could be located partially or totally below ground, and with its natural convection cooling system, it does not rely on an elaborate system of pumps and valves to provide safety. There is no scenario in which a loss-of-coolant accident could occur.

#### DOE funding SMRs now---more to come

Holly 12/6 Derrill, ECT Staff Writer, "DOE Advances Small Nuclear Reactors", 2012, [www.ect.coop/power-supply/power-plants/doe-funds-small-nuclear-reactors-project/50667](http://www.ect.coop/power-supply/power-plants/doe-funds-small-nuclear-reactors-project/50667)

The Department of Energy has agreed to help fund a small modular nuclear reactor design backed by a consortium that includes several generation and transmission electric cooperatives.¶ After reviewing several proposals, DOE selected a project led by Bechtel Corp., Babcock & Wilcox and the Tennessee Valley Authority. The mPower Consortium was formed in in 2010 to support the Generation mPower small modular nuclear reactor design. The consortium includes investor-owned FirstEnergy, TVA, and 13 G&Ts.¶ The lead companies have proposed deployment of up to five 180 megawatt Babcock & Wilcox mPower reactors at TVA’s abandoned Clinch River Breeder Reactor site in Oak Ridge, Tenn.¶ “DOE will match future engineering and design development, design certification and licensing activities up to a cap of $452 million,” said Sandra Byrd, vice president of member and public relations for Little Rock-based Arkansas Electric Cooperative Corp. “Although the mPower design is already far along, it still requires more testing and the design certification documents have to be developed and submitted to the Nuclear Regulatory Commission for approval.”¶ Plans call for the consortium to submit documentation to NRC by December 2013. An early site permit and a construction and operating license application will also be developed for submission over the next year.¶ “This will be the first time that a small nuclear design has been submitted to NRC for review and approval,” said Byrd, adding that commercial operation could begin between 2020 and 2022. Successful deployment of the technology is expected to lead to development of nuclear power plants roughly one-third the size of existing facilities, and DOE plans to issue additional funding opportunities.¶ “More is obviously better. Different designs may lend themselves to different utility operating situations,” said Byrd. Co-ops supported proposals from three of the four companies that sought consideration under the initial DOE cost-sharing grant.¶ Arkansas Electric Cooperative Corp. is among mPower Consortium backers also supporting the NexStart SMR Alliance led by Westinghouse and investor-owned Ameren Missouri. Springfield, Mo.-based Associated Electric Cooperative is also supporting the group.

# 2AC

## Grid

### AT: Grid Resilient

#### 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 Department of Defense, 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 Department of Defense.”¶ 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…”

## Radar

### Primacy Solves All Escalation

#### Nuclear primacy controls every impact

Lieber & Press 9 - Keir A. Lieber, Assistant Professor of Political Science at the University of Notre Dame, and Daryl G. Press, Associate Professor of Political Science at the University of Pennsylvania, November-December 2009, “The Nukes We Need: Preserving the American Deterrent,” Foreign Affairs, p. 50-51

A second criticism of the argument for retaining and improving certain counterforce capabilities is that the cure could be worse than the disease. Counterforce capabilities may mitigate escalation during a conflict—for example, by dissuading adversaries from nuclear saber rattling, by reassuring allies that the United States can defend them, and, if necessary, by giving the United States the ability to pursue regime change if adversaries brandish or use nuclear weapons. But they may also exacerbate the problem of controlling escalation if an adversary feels so threatened that it adopts a hair-trigger nuclear doctrine. Specifically, the United States’ ability to launch a disarming strike without killing millions of civilians might increase the escalatory pressures that already exist because of the nature of the U.S. military’s standard wartime strategy. Conventional air strikes on radar systems, communication links, and leadership bunkers may look even more like the precursors of a preemptive disarming strike if adversaries know that the United States possesses a well-honed nuclear counterforce capability.

This second criticism has merit. Nevertheless, the benefits of maintaining effective counterforce capabilities trump the costs. Strong counterforce capabilities should make adversaries expect that escalating a conventional war will lead to a disarming attack, not a cease-fire. Beyond deterrence, these capabilities will provide a more humane means of protecting allies who are threatened by nuclear attack and give U.S. leaders the ability to pursue regime change if an adversary acts in a truly egregious fashion. Moreover, some danger of escalation is unavoidable because the style of U.S. conventional operations will inevitably blind, rattle, and confuse U.S. adversaries. If the United States has powerful counterforce tools, these may dissuade its enemies from escalating in desperate times, and U.S. leaders would have a much more acceptable option if deterrence fails.

The nuclear forces the United States builds today must be able to act as a reliable deterrent, even in much darker times. Many of those who recommend a much smaller U.S. nuclear arsenal—and assign little importance to a nuclear counterforce option—fail to consider the great difficulties of maintaining deterrence during conventional wars. The U.S. nuclear arsenal should retain sufficient counterforce capabilities to make adversaries think very carefully before threatening to use, putting on alert, or actually using a nuclear weapon. Any nuclear arsenal should also give U.S. leaders options they can stomach employing in these high-risk crises. Without credible and effective options for responding to attacks on allies or U.S. forces, the United States will have difficulty deterring such attacks. Unless the United States maintains potent counterforce capabilities, U.S. adversaries may conclude—perhaps correctly—that the United States’ strategic position abroad rests largely on a bluff.

## Solvency

### AT: Community Relations DA

#### DoD programs now resolve backlash

M2 Presswire 12, “'Pockets of excellence' across Army, but work still needs to be done on health of force,” 7/30/12, lexis

Additionally, Ferriter said, about two-thirds of military families live in the local communities off base. The Army is working to make stronger connections with those communities, with community groups, and with sports teams, for instance, to ensure that military families stay engaged. ¶ Finally, Ferriter said, the Army is working, from headquarters-level in Washington, to further efforts that help keep military spouses employed when they move from state to state as part of the transition process. Continuity, Ferriter said, is critical. To that end, the Army has worked to develop a program where credentials that military spouses might need to do their jobs can be transferred from state to another during a transition. About 23 states now participate, he said. ¶ The Army is also making a similar effort that will allow the children of military families to transfer school credits from one school to another. ¶ "What we offer is a full layer cake of opportunity to create stability and certainty during this time of a lot of movement," Ferriter said. ¶ COMMANDERS ARE ENGAGED¶ Following the visit around the force, at installations chosen both for their size and their diversity, Austin said he came away with one clear picture of the Army's health. ¶ "The overriding piece of feedback is that commanders are engaged and are very concerned about taking care of their troops and are very focused on building a better force," Austin said.

#### Islanding provides benefits for communities

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

Electricity control capabilities, such as self-healing 6 and optimization of assets to increase operational efficiency, could improve overall power availability; however, they are not necessary for the integration of small nuclear power plants. Key components for improving electricity control include advanced electricity meters and electricity meter data management. These tools are needed in order to establish islanding, a condition in which a portion of the utility system, which contains both load and generation, is isolated from the remainder of the utility system and continues to operate. Since the power generation capacities of small nuclear power plants are larger than required for most DoD bases, islanding could extend to adjacent communities if sufficient technical upgrades were performed to systems outside of the installation. This contributes to DoD missions because civilians and service members working on the installation often live with their families in adjacent communities. The power would ensure that critical services such as emergency response, waste water treatment, and hospitals could be maintained.

### AT: Accidents DA

#### Global nuclear expansion now

BI 12 Breakthrough Institute on The Energy Collective, July 31, "Worldwide Nuclear Energy Expansion Continues", theenergycollective.com/breakthroughinstitut/98406/worldwide-nuclear-energy-expansion-continues

Global production of nuclear energy is expected to grow significantly in future years, despite setbacks in Japan and Germany, as China and the United States eyes next-generation reactors.¶ Worldwide nuclear electricity generating capacity is expected to increase between 44 percent and 99 percent by 2035, the International Atomic Energy Agency and the Organization for Economic Cooperation and Development Nuclear Energy Agency said in their joint biannual report on uranium resources, released this week.¶ Japan's decision to shut down all but two of its nuclear reactors in the wake of the nuclear accident at Fukushima Daiichi last year played in to Germany's decision to phase out nuclear by 2022, but has apparently not slowed plans in other parts of Asia. Nuclear energy will see the sharpest expansion in China, India, and South Korea, the agencies said in a release, as well as in Russia.¶ Gary Dyck, head of nuclear fuel cycle and materials at the International Atomic Energy Agency, told Reuters that the long-term impact of Fukushima on global nuclear energy production was a "speed bump... We still expect huge growth in China."¶ Capacity in East Asia will jump by 125 percent to 185 percent, according to the report.¶ Though China suspended new nuclear projects in the wake of Fukushima, it now appears that China will react to the incident by turning to newer, domestically produced nuclear reactors, Harvard research scholar Yun Zhou wrote last month.¶ "It appears that the Fukushima disaster may lead China to adopt newer, third-generation (or Gen III) reactor designs created by Chinese firms, allowing China to wean itself from purely foreign reactor technology much more quickly than was expected pre-Fukushima," she wrote. "In fact, a race to develop indigenous Gen III technology is emerging, with all three major nuclear power companies in China announcing their own Gen III reactor designs."¶ China's 22 Generation II reactors currently under construction will not go under any major redesigns, but its additional 14 planned reactors are much more likely to be advanced models.

## K

### AT: Centralization K

#### Nuclear technocracy’s key

Ted Nordhaus 11, chairman – Breakthrough Instiute, and Michael Shellenberger, president – Breakthrough Institute, MA cultural anthropology – University of California, Santa Cruz, 2-25, <http://thebreakthrough.org/archive/the_long_death_of_environmenta>)

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

#### Commodification arguments are wrong

Wagner 11 Gernot, economist at EDF, where he works in the office of economic policy and analysis, “But Will the Planet Notice? How Smart Economics Can Save the World.” Hill and Wang Press, p. 11-12

The fundamental forces guiding the behavior of billions are much larger than any one of us. It's about changing our system, creating a new business as usual. And to do that we need to think about what makes our system run. In the end, it comes down to markets, and the rules of the game that govern what we chase and how we chase it. Scientists can tell us how bad it will get. Activists can make us pay attention to the ensuing instabilities and make politicians take note. When the task comes to formulating policy, only economists can help guide us out of this morass and save the planet. In an earlier time with simpler problems, environmentalists took direct action against the market's brutal forces by erecting roadblocks or chaining themselves to trees. That works if the opposing force is a lumberjack with a chain saw. It might even work for an entire industry when the task is to ban a particular chemical or scrub a pollutant out of smokestacks. But that model breaks down when the opposing force is ourselves: each and every one of us demanding that the globalized market provide us with cheaper and better food, clothes, and vacations. There is no blocking the full, collective desires of the billions who are now part of the market economy and the billions more who want to—and ought to—be part of it. The only solution is to guide all-powerful market forces in the right direction and create incentives for each of us to make choices that work for all of us. The guideposts we have today for market forces evolved helter- skelter from a historical process that gave almost no weight to the survival of the planet, largely because the survival of the planet was not at stake. Now it is. Since we can't live without market forces, we need to guide them to help us keep the human adventure going in workable ways, rather than continue on the present path right off the edge of a cliff.

#### Prior questions fail and paralyze politics

Owen 2 (David Owen, Reader of Political Theory at the Univ. of Southampton, Millennium Vol 31 No 3 2002 p. 655-7)

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

#### We’re not nuclear optimism---it’s supported based on science and checked by pessimists

Adams 10 Rod, Technological Realism Should Replace Optimism, Pro-nuclear advocate with small nuclear plant operating and design experience. Former submarine Engineer Officer, <http://atomicinsights.com/2010/05/technological-realism-should-replace-optimism.html>

As a “served engineer” on a nuclear powered submarine, I learned a long time ago that things go wrong, even with the very best technology. The recognition of inevitable “problems” should not deter technical development and should not make people afraid to develop new products and services, but it should add a healthy dose of humility backed up by continuous efforts to prepare for the worst. My experiences have taught me to be uncomfortable with any proclamation of inevitable progress. I have worked on IT projects, been a full participant in the digital revolution, operated a custom plastics manufacturing company, and watched the nuclear industry work to regain respectability after some serious missteps in its early development history. Progress is hard work and there are often failures that reset the development cycle just as it seems ready to take off. Too many technology observers and pundits point to Moore’s Law as some kind of a general rule for technical developments. Moore’s Law is a very particular pronouncement – in 1965, Gordon Moore recognized that there was a recognizable path forward that would allow manufacturers to double the number of transistors that could be inexpensively placed on a chip every year for the next ten years and he recognized that he could apply that law to the 15-20 years of chip development that had already happened. He modified his prediction in 1975 to increase the doubling time to two years instead of one. He predicted that the implementation of that path would allow an increasing quantity of processing power, assuming that it would be possible to keep all of the transistors firing at the same rate as before. Moore’s Law does not apply to software development, to steel making, to underwater sensors, to remote manipulators, to wind energy collection systems, or to the rate of IP data transmission using satellite networks. It is not even infinitely applicable to semiconductor based processors – there are physical limits to the size of transistors and connecting wires that will eventually provide an asymptote that levels out the growth of processing power. I have never had much “faith” in technology. I like technology. I use lots of technology; my children have occasionally called me “Inspector Gadget” because of all of the tools (my wife and children sometimes call them “toys”) I have accumulated over the years. However, I understand the limits of the technology that I use. I read the manuals, heed the warnings, plan for failure, and worry about the potential consequences of inappropriately using technical devices. I know that no technology can overcome physical barriers; nothing I or anyone else can do will provide power from the wind when it is not blowing and nothing that I or anyone else can invent will enable chemical combustion to provide reliable heat energy without both a source of oxygen and a place to dump the waste products. Nothing that I or anyone else can invent will enable oil extraction from a dry well. I also know that not everything that breaks can be fixed, even if there is an unlimited amount of time and money. Some breaks and fissures can never be welded shut or forced to heal. This is where I believe that humble engineers and technicians who are not driven by sales numbers have a huge role to play. Their (our) natural pessimism can help to reduce the consequences of always listening to the optimists, the people who say “damn the torpedoes”, “failure is not an option”, or “whatever it takes”. Failure is always possible. Before stretching limits it is important to recognize the consequences of the failure to determine if they are acceptable. If the reasonably predictable “worst possible event” results in consequences that cannot be accepted, the prudent course of action is to avoid the action in the first place. I place deepwater drilling for oil and gas into that category. It is pretty obvious that the possible consequences are unacceptable and that technological development has not yet found a way to mitigate those consequences. I am not sure what the limits of “deepwater” should be, but it is apparent that 5,000 feet is beyond the limit. I do not place operating nuclear energy production facilities in that category. However, there are very definitely some kinds of nuclear plants – like very large graphite-moderated, water-cooled reactors operated by people who override safety systems and ignore warning indications – that have proven that they can cause consequences that are not acceptable. The real value comes in determining what the reasonably predictable consequences might be and what failure modes are reasonable to assume. For people who have no firm foundation in real world mechanics, chemistry and physics, it is possible to spin all kinds of scary scenarios that depend on a series of impossible events. (Note: Just because I believe that there is always something that can go wrong, I do not believe that all things are possible.) My prescription for progress is not “faith” in engineers or technologists. It is for people to approach challenges with knowledge, a questioning attitude, humility and a willingness to expend the resources necessary to operate safely. A thirst for maximizing short term profits or an attitude of blind optimism are both incompatible with performing difficult tasks in potentially dangerous environments.

#### The squo is structurally improving

Goklany 9**—**Worked with federal and state governments, think tanks, and the private sector for over 35 years. Worked with IPCC before its inception as an author, delegate and reviewer. Negotiated UN Framework Convention on Climate Change. Managed the emissions trading program for the EPA. Julian Simon Fellow at the Property and Environment Research Center, visiting fellow at AEI, winner of the Julian Simon Prize and Award. PhD, MS, electrical engineering, MSU. B.Tech in electrical engineering, Indian Institute of Tech. (Indur, “Have increases in population, affluence and technology worsened human and environmental well-being?” 2009, http://www.ejsd.org/docs/HAVE\_INCREASES\_IN\_POPULATION\_AFFLUENCE\_AND\_TECHNOLOGY\_WORSENED\_HUMAN\_AND\_ENVIRONMENTAL\_WELL-BEING.pdf)

Although global population is no longer growing exponentially, it has quadrupled since 1900. Concurrently, affluence (or GDP per capita) has sextupled, global economic product (a measure of aggregate consumption) has increased 23-fold and carbon dioxide has increased over 15-fold (Maddison 2003; GGDC 2008; World Bank 2008a; Marland et al. 2007).4 But contrary to Neo- Malthusian fears, average **human well-being,** measured by any objective indicator, **has never been higher**. Food supplies, Malthus’ original concern, are up worldwide. Global food supplies per capita increased from 2,254 Cals/day in 1961 to 2,810 in 2003 (FAOSTAT 2008). This helped reduce hunger and malnutrition worldwide. The proportion of the population in the developing world, suffering from chronic hunger declined from 37 percent to 17 percent between 1969–71 and 2001–2003 despite an 87 percent population increase (Goklany 2007a; FAO 2006). The reduction in hunger and malnutrition, along with improvements in basic hygiene, improved access to safer water and sanitation, broad adoption of vaccinations, antibiotics, pasteurization and other public health measures, helped reduce mortality and increase life expectancies. These improvements first became evident in today’s developed countries in the mid- to late-1800s and started to spread in earnest to developing countries from the 1950s. The infant mortality rate in developing countries was 180 per 1,000 live births in the early 1950s; today it is 57. Consequently, global life expectancy, perhaps the single most important measure of human well-being, increased from 31 years in 1900 to 47 years in the early 1950s to 67 years today (Goklany 2007a). Globally, average **annual per capita incomes tripled** since 1950. The proportion of the world’s population outside of high-income OECD countries living in absolute poverty (average consumption of less than $1 per day in 1985 International dollars adjusted for purchasing power parity), fell from 84 percent in 1820 to 40 percent in 1981 to 20 percent in 2007 (Goklany 2007a; WRI 2008; World Bank 2007). Equally important, the world is more literate and better educated. Child labor in low income countries declined from 30 to 18 percent between 1960 and 2003. In most countries, people are freer politically, economically and socially to pursue their goals as they see fit. More people choose their own rulers, and have freedom of expression. They are more likely to live under rule of law, and less likely to be arbitrarily deprived of life, limb and property. Social and professional mobility has never been greater. It is easier to transcend the bonds of caste, place, gender, and other accidents of birth in the lottery of life. People work fewer hours, and have more money and better health to enjoy their leisure time (Goklany 2007a). Figure 3 summarizes the U.S. experience over the 20th century with respect to growth of population, affluence, material, fossil fuel energy and chemical consumption, and life expectancy. It indicates that population has multiplied 3.7-fold; income, 6.9-fold; carbon dioxide emissions, 8.5-fold; material use, 26.5-fold; and organic chemical use, 101-fold. Yet its life expectancy increased from 47 years to 77 years and infant mortality (not shown) declined from over 100 per 1,000 live births to 7 per 1,000. It is also important to note that not only are people living longer, they are healthier. The disability rate for seniors declined 28 percent between 1982 and 2004/2005 and, despite better diagnostic tools, major diseases (e.g., cancer, and heart and respiratory diseases) occur 8–11 years later now than a century ago (Fogel 2003; Manton et al. 2006). If similar figures could be constructed for other countries, most would indicate qualitatively similar trends, especially after 1950, except Sub-Saharan Africa and the erstwhile members of the Soviet Union. In the latter two cases, life expectancy, which had increased following World War II, declined after the late 1980s to the early 2000s, possibly due poor economic performance compounded, especially in Sub-Saharan Africa, by AIDS, resurgence of malaria, and tuberculosis due mainly to poor governance (breakdown of public health services) and other manmade causes (Goklany 2007a, pp.66–69, pp.178–181, and references therein). However, there are signs of a turnaround, perhaps related to increased economic growth since the early 2000s, although this could, of course, be a temporary blip (Goklany 2007a; World Bank 2008a). Notably, in most areas of the world, the healthadjusted life expectancy (HALE), that is, life expectancy adjusted downward for the severity and length of time spent by the average individual in a less-than-healthy condition, is greater now than the unadjusted life expectancy was 30 years ago. HALE for the China and India in 2002, for instance, were 64.1 and 53.5 years, which exceeded their unadjusted life expectancy of 63.2 and 50.7 years in 1970–1975 (WRI 2008). Figure 4, based on cross country data, indicates that contrary to Neo-Malthusian fears, both life expectancy and infant mortality improve with the level of affluence (economic development) and time, a surrogate for technological change (Goklany 2007a). Other indicators of human well-being that improve over time and as affluence rises are: access to safe water and sanitation (see below), literacy, level of education, food supplies per capita, and the prevalence of malnutrition (Goklany 2007a, 2007b).

### AT: Lifton

#### Obama solves superpower syndrome---and if he doesn’t, the plan only makes it worse by triggering a conservative backlash---cut some Lifton updates

Robert J. Lifton 11, aff guy, 2011, Witness to an Extreme Century: A Memoir, p. 405-406

With all of the American angst during the first year or so of the Obama administration, one may readily forget the power of the historical moment of his election in 2008. BJ and I had a few friends in to watch the returns on the sleek television set in our living room, which we had purchased four years earlier for a similar gathering that had resulted in a roomful of despair and suspicion of fraud in relation to the Bush victory. But this time, in 2008, the television set did not betray us, and my reaction of not just joy but ecstasy, including tears, was hardly mine alone. What was special to me, though, was the quick realization that the outcome meant an end to the country's superpower syndrome. But was that the case? Only partly, it turns out. Certainly Obama and his administration have renounced the principle of American omnipotence in favor of more modest claims about our capacities and influence in the world. Apocalypticism and totalistic behavior have given way to something closer to Camus's "philosophy of limits" with an acceptance of ambiguity, nuance, and complexity. And most important, there has been a specific rejection of nuclearism and a call for abolition of the weapons.

Yet despite all that, the syndrome lingers in crucial areas that specifically connect with my work. Concerning nuclear abolition, Obama has not followed through with clear American policies, despite an impressive convocation of world leaders on the subject of nuclear danger. On revelations of torture, and more recently of illegitimate medical experiments in relation to torture, Obama has mostly tried to sidestep the issue and avoid legal culpability of those involved. Finally, his decision to send added troops to Afghanistan seems to me to be the stuff of war-making, and atrocity-producing, blunder. In all three cases there is a certain clinging to the very American omnipotence being renounced. I have found myself torn between joining a considerable segment of the left in a condemnation of shortcomings that perpetuate elements of the superpower syndrome, and an alternative inclination to defend Obama as an incremental reformer who needs more time.

I took the latter position in a series of discussions with Howard Zinn, who denounced Obama as "a Chicago politician" and a hypocrite. I still don't agree with that judgment but I am also willing to take a public stand of strong opposition to Obama policies on Afghanistan and on American torture and recently revealed experimentation. Yet I remain sensitive as well to the importance of supporting the Obama administration in the face of new waves of right-wing American totalism and potential violence in the backlash over the election of our first African-American president.

### AT: Genocide/Lash-Out

#### Democracy checks

**O’Kane 97 –** Prof Comparative Political Theory, U Keele (Rosemary, “Modernity, the Holocaust and politics,” Economy and Society 26:1, p 58-9)

Modern bureaucracy is not 'intrinsically capable of genocidal action' (Bauman 1989: 106). Centralized state coercion has no natural move to terror. In the explanation of modern genocides it is chosen policies which play the greatest part, whether in effecting bureaucratic secrecy, organizing forced labour, implementing a system of terror, harnessing science and technology or introducing extermination policies, as means and as ends. As Nazi Germany and Stalin's USSR have shown, furthermore, those chosen policies of genocidal government turned away from and not towards modernity. The choosing of policies, however, is not independent of circumstances. An analysis of the history of each case plays an important part in explaining where and how genocidal governments come to power and analysis of political institutions and structures also helps towards an understanding of the factors which act as obstacles to modern genocide. But it is not just political factors which stand in the way of another Holocaust in modern society. Modern societies have not only pluralist democratic political systems but also economic pluralism where workers are free to change jobs and bargain wages and where independent firms, each with their own independent bureaucracies, exist in competition with state-controlled enterprises. In modern societies this economic pluralism both promotes and is served by the open scientific method. By ignoring competition and the capacity for people to move between organizations whether economic, political, scientific or social, Bauman overlooks crucial but also very 'ordinary and common' attributes of truly modern societies. It is these very ordinary and common attributes of modernity which stand in the way of modern genocides.

### Wright

**The alt’s all-or-nothing choice fails --- small reforms like the plan are key to institutional change and getting others to sign on to the alt**

Erik Olin **Wright 7**, Vilas Distinguished Professor of Sociology at the University of Wisconsin, “Guidelines for Envisioning Real Utopias”, Soundings, April, www.ssc.wisc.edu/~wright/Published%20writing/Guidelines-soundings.pdf

5. Waystations The final guideline for discussions of envisioning real utopias concerns the importance of waystations. The central problem of envisioning real utopias concerns the viability of institutional alternatives that embody emancipatory values**,** but the practical achievability of such institutional designs often **depends upon the existence of smaller steps**, intermediate institutional innovations that move us in the right direction but only partially embody these values**.** Institutional proposals which have an **all-or-nothing quality** to them are both **less likely to be adopted in the first place, and may pose more difficult transition-cost problems** if implemented**.** The catastrophic experience of Russia in the “shock therapy” approach to market reform is historical testimony to this problem. Waystations are a difficult theoretical and practical problem because there are many instances in which partial reforms may have very different consequences than full- bodied changes. Consider the example of unconditional basic income. Suppose that a very limited, below-subsistence basic income was instituted: not enough to survive on, but a grant of income unconditionally given to everyone. One possibility is that this kind of basic income would act mainly as a subsidy to employers who pay very low wages, since now they could attract more workers even if they offered below poverty level earnings. There may be good reasons to institute such wage subsidies, but they would not generate the positive effects of a UBI, and therefore might not function as a stepping stone. What we ideally want**, therefore,** are intermediate reforms that have two main properties: **first,** they concretely demonstrate the virtues of the fuller program of transformation, so they contribute to the ideological battle of **convincing people that the alternative is credible and desirable;**

**and second,** they **enhance the capacity for action of people**, increasing their ability to push further in the future. Waystations that increase popular participation and **bring people together in problem-solving deliberations** for collective purposes are particularly salient in this regard**.** This is what in the 1970s was called “nonreformist reforms”**:** reforms that are **possible within existing institutions** and that **pragmatically solve real problems** while at the same time empowering people in ways which **enlarge their scope of action in the future.**

## CP

### DARPA CP

#### DARPA fails

Bonvillian and Van Atta 12 William, director of the MIT Washington Office and a former senior policy advisor in the U.S. Senate, teaches innovation policy and energy technology courses on the

adjunct faculties at Georgetown University and at Johns Hopkins-SAIS and Richard, former assistant deputy under secretary at the Department of Defense, is with the Institute for

Defense Analyses and teaches security studies on the adjunct faculty at Georgetown University, “THE ENERGY TECHNOLOGY CHALLENGE: COMPARING THE DARPA AND ARPA-E MODELS”, Energy Innovation at the Department of Defense: Assessing the Opportunities, March, PDF online

Both DARPA and ARPA-E face a profound challenge in technology implementation. For DARPA, the Cold War era of major defense acquisition budgets is long gone, and defense “recapitalization”— replacement of the existing generation of aircraft, ships, and land vehicles with new defense platforms—is evolving at a glacial pace. Finding homes for its evolving technologies, therefore, has increasingly become a difficult task for DARPA. Because technology transition was once a relatively straightforward task for DARPA, it has not yet fully faced up to the implications of how complex it has now become. ARPA-E faces a technology transfer problem of the first magnitude: the U.S. has a very limited history of moving technology advances into and transforming CELS, including in energy.¶ Although ARPA-E faces a long list of challenges, the problem of technology implementation is perhaps the most profound. This is because of the difficulty new energy technologies face, not only with the problem of the Valley of Death in moving from research to late-stage development, but the problem endemic to CELS of market launch—implementing technology at scale. ARPA-E has worked imaginatively to structure new elements into its model to address this problem. The models of the Strategic Environmental R&D Program (SERDP) and Environmental Security Technology Certification Program (ESTCP) from DoD, where the R&D entity directly hands off to the test bed, provides an interesting new model in the energy area for ARPA-E to consider as it focuses on technology implementation. Collaboration with these programs, which ARPA-E is actively working on, may provide a crucial new tool set. ARPA-E is not alone in facing this implementation problem; the applied agencies at DOE, led by EERE, face a similar problem, and the SERDP/ESTCP combined model of R&D-test bed-deployment offers an interesting new approach. DARPA, too, despite remarkable past successes, is not immune, as suggested above, from the implementation problem, which appears to be growing. It, too, might learn lessons and make further uses of the SERDP/ESTCP approach.

## DA

### 2AC India DA

#### No commercialization

Reitenbach 12 Dr. Gail, POWER's Managing Editor, "The U.S. Military Gets Smart Grid", January 1, www.powermag.com/smart\_grid/The-U-S-Military-Gets-Smart-Grid\_4228\_p3.html

There should be no question about the importance of more self-reliant, sophisticated, and flexible power grids for the military. However, the trickle-down benefits of DOD smart grid technology pilots for non-military electricity customers—in terms of new technologies and lower prices—may be limited.¶ To take a small example, the EVs currently being developed for the military are custom builds (as so much is for the military) by a new entrant, which suggests that the likely tech transfer between REV and the dozens of mainstream "legacy" automakers with better consumer brand awareness could be minimal. What could transfer to the civilian grid from V2G pilots is a better understanding of how to handle the distribution-level technical issues involved in using EV-stored energy to provide grid-balancing ancillary services. The regulatory and economic aspects of that transaction would be another matter. ¶ Other energy storage technologies developed for military applications may not translate quickly into civilian life because of cost constraints, whereas the military's primary reason for deploying energy storage is security rather than least cost. Over time, however, we can hope that experience gained in military applications leads to cheaper technologies.¶ Another limiting factor is that even for technologies that work technically, working practically can mean different things in military and civilian contexts. Microgrids, for example, are likely to remain relegated to energy users who put a premium on reliable power supply—including various types of industrial, corporate, and educational campuses. ¶ Though the size of military renewable generation installations is smaller than most utility-scale projects beyond base gates, military microgrid projects may provide valuable lessons about balancing renewable and fossil-fueled generation sources. They could also accelerate greater deployment of distributed renewable generation, something that at least one leading utility CEO, NRG Energy Inc.'s David Crane, already has his eye on. According to an interview with Yale Environment 360, "The electricity future, says Crane, will be transformed by the widespread adoption of three innovations: solar panels on residential and commercial roofs, electric cars in garages, and truly 'smart meters' that will seamlessly transfer power to and from homes, electric vehicles, and the grid."

#### US licensing takes too long to gain market share

Charles D. Ferguson 10, President, Federation of American Scientists, 5/19/10, Statement before the House Committee on Science and Technology for the hearing on Charting the Course for American Nuclear Technology: Evaluating the Department of Energy’s Nuclear Energy Research and Development Roadmap, http://gop.science.house.gov/Media/hearings/full10/may19/Ferguson.pdf

What are the implications for the United States of Chinese and Indian efforts to sell small and medium power reactors? Because China and India already have the manufacturing and marketing capability for these reactors, the United States faces an economically competitive disadvantage. Because the United States has yet to license such reactors for domestic use, it has placed itself at an additional market disadvantage. By the time the United States has licensed such reactors, China and India as well as other competitors may have established a strong hold on this emerging market. ¶ The U.S. Nuclear Regulatory Commission cautioned on December 15, 2008 that the “licensing of new, small modular reactors is not just around the corner. The NRC’s attention and resources now are focused on the large-scale reactors being proposed to serve millions of Americans, rather than smaller devices with both limited power production and possible industrial process applications.” The NRC’s statement further underscored that “examining proposals for radically different technology will likely require an exhaustive review” … before “such time as there is a formal proposal, the NRC will, as directed by Congress, continue to devote the majority of its resources to addressing the current technology base.” 6 Earlier this year, the NRC devoted consideration to presentations on small modular reactors from the Nuclear Energy Institute, the Department of Energy, and the Rural Electric Cooperative Association among other stakeholders. 7 At least seven vendors have proposed that their designs receive attention from the NRC.8

#### No global liability regime exists---prevents US exports

ITA 11 – International Trade Administration, U.S. Department of Commerce, February 2011, “The Commercial Outlook for U.S. Small Modular Nuclear Reactors,” http://trade.gov/mas/ian/build/groups/public/@tg\_ian/@nuclear/documents/webcontent/tg\_ian\_003185.pdf

Nuclear liability is a significant concern for SMR and large reactor designers. Currently, no global nuclear liability regime exists. This situation not only complicates commercial arrangements, but also means that, in the unlikely event of a nuclear incident, claims for damages would be the subject of protracted and complicated litigation in the courts of many countries against multiple potential defendants with no guarantee of recovery. The IAEA-sponsored Convention on Supplementary Compensation for Nuclear Damage (CSC) is the only international instrument that provides the basis for establishing a global regime, including countries with and without nuclear power facilities. U.S. nuclear suppliers have stated that the implementation of CSC is a necessity for pursuing a major nuclear export program.

#### Nuclear is just 2% of Indian electricity

BBC 12

Puneet Pal Singh, 31 July 2012, “India's energy crisis threatens its economic growth,” http://www.bbc.co.uk/news/business-19059213

As India's economy expands and the population increases, the country will need to generate even more power to meet the growing demand.

India currently generates more than 65% of its total electricity from non-renewable sources of energy such as coal, gas and oil.

About 19% comes from hydro power, just over 2% from nuclear energy and 12% from other renewable sources.

### 2AC Hagel DA

#### Won’t be confirmed --- no PC, GOP opposition, PR, and primary concerns

Maggie Haberman 1-7, Politico, “GOP sees political payback in Hagel pick” <http://www.politico.com/story/2013/01/gop-sees-political-payback-in-hagel-pick-85867.html?hp=t1_3>

As the tactical skirmishing begins over Chuck Hagel’s nomination to be Secretary of Defense, the short-term political calculus from 30,000 feet clearly favors Republicans: Hagel’s confirmation hearings are a potential boon for the GOP and a source of queasiness for pro-Israel Democrats, despite the historically long odds of blunting a presidential pick.¶ Republicans, smarting after the debacle in the House GOP caucus in the lead-up to the mini-fiscal cliff deal, are looking to notch a win on the scoreboard, while being mindful of the politics of holding up presidential prerogative on Cabinet appointees. For foreign policy wonks, it is a pivot point for a debate about the post-Bush doctrine of the Republican party.¶ For Democrats, there’s a peril of crossing a re-elected president – but also the risk of backing someone who their pro-Israel and gay supporters, along with some donors, aren’t entirely comfortable with. At minimum, senators will be under pressure to extract as much from Hagel as they can before saying they’ll support him.¶ For the White House, the choice of Hagel gives the president a post-Susan Rice opportunity to show he’ll stick by his principles as well as offering proof that White House aides have learned the lesson of leaving appointees undefined in the current political climate. But it also embroils the president, who had capital to spend after a lopsided electoral win in November, in a potentially ugly and, some Senate Democratic aides say privately, unnecessary fight given other elements of his agenda.¶ And across Washington, while the conventional wisdom seems to slightly favor Hagel being confirmed, many in both parties are hedging their bets to see how the next few weeks play out.¶ “It’s going to be a classic Beltway fight where the opponents on both sides are waging a classic [publicity] war against him,” said one Republican operative.¶ There are few other recent examples of a former senator – and member of an exclusive club – facing stiff opposition in confirmation hearings. One exception to the rule: John Ashcroft, who was appointed Attorney General by George W. Bush in 2000 after losing his Missouri Senate race.¶ “The president’s determined to have the nominee he wants in the position he wants and not…get caught up in trivial politics that don’t amount to a hill of beans,” said Democratic strategist Jonathan Prince.¶ (Also on POLITICO: 5 groups that could hamstring Hagel)¶ But the hill of beans facing Hagel could be unusually steep. Given Hagel’s status as a former senator with no natural constituency in either party, each senator has parochial concerns related to their own races to consider as they weigh a confirmation vote. Many of them didn’t like Hagel personally, not just politically, two Republican operatives pointed out.¶ The White House knows “this is an in-your-face pick,” said Republicans strategist Curt Anderson. “To Republicans, he’s not just a moderate Republican…it’s that he’s an apostate Republican.”¶ One Republican operative put it more bluntly: “Republicans are looking for a fight…It’s a rare gift.”¶ Another said, “It’s bound to help people in 2014 if they’re seen as being aggressive.”¶ Republicans whose seats come up in 2014 – and who don’t have much love lost for Hagel in the first place – don’t want to give fodder to potential primary challengers by casting a vote for the president’s Defense pick, whose comments about the “Jewish lobby” and Iran sanctions have been widely circulated.¶ A number of senators who could face primaries – such as John Cornyn of Texas, Saxby Chambliss of Georgia, Pat Roberts of Kansas, Lamar Alexander of Tennessee, Lindsey Graham of South Carolina – have nothing clear to gain politically by supporting Hagel. Graham was among the most vocal against him on the Sunday’s morning show circuit.¶ “It’s one of those votes that is not very consequential, but could become a symbol of sorts,” said Anderson. “It’s quite ironic that a vote for (Secretary of State nominee Sen. John) Kerry is safer than a vote for Hagel.”

#### Executive military action shields

Davenport 12 Coral, 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, 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.

#### Low PC inevitable and not key to Hagel

Schier 11 Steven E. Schier is the Dorothy H. and Edward C. Congdon professor of political science at Carleton College, The contemporary presidency: the presidential authority problem and the political power trap. Presidential Studies Quarterly December 1, 2011 lexis

Implications of the Evidence¶ The evidence presented here depicts a decline in presidential political capital after 1965. Since that time, presidents have had lower job approval, fewer fellow partisans and less voting support in Congress, less approval of their party, and have usually encountered an increasingly adverse public policy mood as they governed.¶ Specifically, average job approval dropped. Net job approval plummeted, reflecting greater polarization about presidential performance.The proportion of fellow partisans in the public dropped and became less volatile. Congressional voting support became lower and varied more. The number of fellow partisans in the House and Senate fell and became less volatile. Public issue mood usually moved against presidents as they governed. All of these measures, with the exception of public mood, correlate positively with each other, suggesting they are part of a broader phenomenon.¶ That "phenomenon" is political authority. The decline in politicalcapital has produced great difficulties for presidential political authority in recent decades. It is difficult to claim warrants for leadership in an era when job approval, congressional support, and partisan affiliation provide less backing for a president than in times past.¶ Because of the uncertainties of political authority, recent presidents have adopted a governing style that is personalized, preemptive,and, at times, isolated. Given the entrenched autonomy of other elite actors and the impermanence of public opinion, presidents have had to "sell themselves" in order to sell their governance. Samuel Kernell (1997) first highlighted the presidential proclivity to "go public"in the 1980s as a response to these conditions. Through leveraging public support, presidents have at times been able to overcome institutional resistance to their policy agendas. Brandice Canes-Wrone (2001) discovered that presidents tend to help themselves with public opinion by highlighting issues the public supports and that boosts their congressional success--an effective strategy when political capital is questionable.¶ Despite shrinking political capital, presidents at times have effectively pursued such strategies, particularly since 1995. Clinton's centrist "triangulation" and George W. Bush's careful issue selection early in his presidency allowed them to secure important policy changes--in Clinton's case, welfare reform and budget balance, in Bush's tax cuts and education reform--that at the time received popular approval. This may explain the slight recovery in some presidential political capital measures since 1993. Clinton accomplished much with a GOPCongress, and Bush's first term included strong support from a Congress ruled by friendly Republican majorities. David Mayhew finds that from 1995 to 2004, both highly important and important policy changeswere passed by Congress into law at higher rates than during the 1947-1994 period. (2) A trend of declining political capital thus does not preclude significant policy change, but a record of major policy accomplishment has not reversed the decline in presidential political capital in recent years, either. Short-term legislative strategies can win policy success for a president but do not serve as an antidote to declining political capital over time, as the final years of both the Clinton and George W. Bush presidencies demonstrate.

#### Schumer wants nuclear expansion

Politico 11, “Schumer still willing to consider nuclear power”, 3-13, http://www.politico.com/blogs/politicolive/0311/Schumer\_still\_willing\_to\_consider\_nuclear\_power.html

Sen. Chuck Schumer (D-N.Y.), the No. 3 leader of the Senate, says he's still willing to consider expanding nuclear power in the United States, despite the growing crisis in Japan, which is struggling to avert a meltdown following an earthquake and tsunami.¶ "We are going to have to see what happens," Schumer said on NBC's "Meet the Press." But, he added that the United States needs to work to free itself of dependence on foreign oil.

#### Schumer’s key

Paybarah 1/9 Azi, "A Hagel nomination that could turn on Schumer, after Gillibrand", 2013, www.capitalnewyork.com/article/politics/2013/01/7119034/hagel-nomination-could-turn-schumer-after-gillibrand

Chuck Schumer won't say exactly how he plans to handle the nomination of Chuck Hagel, whose past reference to a "Jewish lobby" and opposition to Iran sanctions have rattled some staunch supporters of Israel.¶ "All I can say is that I have an open mind and I'm ready to sit and listen to him," he told the Wall Street Journal yesterday, echoing the noncommittal statement he put out after President Obama announced on Monday that he would nominate Hagel for defense secretary.¶ Hagel could certainly use Schumer's help. The nomination faces lots of opposition from his former Republican colleagues, who haven't forgotten when he became the public face of opposition to the Iraq War, which means he'll need near-unanimity from Democrats, who might feel safer supporting him with the cover provided by a staunch pro-Israel voice like Schumer.

#### Winners win

Marshall and Prins 11 (BRYAN W, Miami University and BRANDON C, University of Tennessee & Howard H. Baker, Jr. Center for Public Policy, “Power or Posturing? Policy Availability and Congressional Influence on U.S. Presidential Decisions to Use Force”, Sept, Presidential Studies Quarterly 41, no. 3)

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

#### No impact to Hagel

Taylor 1/8/13 (Robert, “Predator Drone Strikes Kill Up to 50 Civilians For Every 1 Terrorist Assassinated: Study”)

This is why the recent news that the president is nominating former Nebraska senator Chuck Hagel for secretary of defense admittedly left me a bit surprised and optimistic. Hagel has a history of [sober](http://original.antiwar.com/justin/2012/12/23/the-crucifixion-of-chuck-hagel/) foreign policy prescriptions — at least compared to the Beltway establishment and his fellow senators — and best of all, believes that U.S. foreign policy should defend [American interests](http://www.guardian.co.uk/world/2013/jan/07/chuck-hagel-not-antisemitic-israel), not Israel's. But even if Hagel is confirmed, it is highly unlikely that he will have the ability to sway Obama's hand. The president, after all, is someone who relishes his nearly universally unquestioned authority to create "kill lists," suspend due process, and dispense arbitrary death from the sky. Besides, Obama wants drone-lover [John Brennan](http://www.csmonitor.com/USA/Politics/2013/0107/With-John-Brennan-Obama-doubles-down-on-drone-strikes-video) to be the new CIA director, and Hagel's voice would likely be drowned out by the screeches of the hawks that surround the White House.

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## CP

### DoD Says No

#### DoD already established its recommendations for SMR adoption

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

Recognizing nuclear power as a potential benefit to Department of Defense (DoD) facilities, Congress directed the DoD, in section 2845 of the National Defense Authorization Act (NDAA) of 2010, to “conduct a study to assess the feasibility of developing nuclear power plants on military installations” [12]. Specifically, the study is to consider the following topics:¶ • Options for construction and operation¶ • Cost estimates and the potential for life-cycle cost savings¶ • Potential energy security advantages¶ • Additional infrastructure costs¶ • Effect on the quality of life of military personnel¶ • Regulatory, state, and local concerns¶ • Effect on operations on military installations¶ • Potential environmental liabilities¶ • Factors that may impact safe colocation of nuclear power plants on military installations¶ • Other factors that bear on the feasibility of developing nuclear power plants on military installations.¶ To meet this requirement, the office of the Deputy Under Secretary of Defense for Installations and Environment, DUSD(I&E), asked CNA to conduct this feasibility study. The CNA effort was directed by a steering group consisting of representatives from DUSD (I&E), each of the military departments, DOE, NRC, and DOE Labs. This report documents our analysis and findings.

#### And it recommended against being an early adopter—proves the CP can’t establish a bureaucratic consensus for the plan

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

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

#### DoD will choose established tech

CNA 10, non-profit research organization that operates the Center for Naval Analyses and the Institute for Public Research, “Powering America’s Economy: Energy Innovation at the Crossroads of National Security Challenges”, July, <http://www.cna.org/sites/default/files/research/WEB%2007%2027%2010%20MAB%20Powering%20America%27s%20Economy.pdf>

In our final discussion, we consider the end of the innovation pipeline—deployment—and we look at how fine-tuning the incentives might help pull more innovative, new energy technologies through the pipeline. Energy use at installations is governed under a stricter rubric than operational energy: a variety of regulatory and legislative mandates have steered DOD toward lowering energy consumption, increasing use of renewables, and promoting conservation and energy efficiency. However, the adoption of new clean energy technologies is still hampered in key installation acquisition programs. To help achieve its energy goals, DOD often employs two mechanisms: the Energy Conservation Investment Program (ECIP) and Energy Savings Performance Contracts (ESPCs). The ECIP program is backed by Congressional appropriations (through military construction funding), and it is designed to allow installations to purchase technologies that save money through conserving energy [55]. The program is viewed widely as being successful, cited as saving more than two dollars for each dollar invested. ESPCs are contracting vehicles that allow DOD to invest in energy-related improvements without expending funds appropriated by Congress. Through ESPCs, DOD partners with private firms that make the energy improvements; in return, the firms’ investments are paid back through the energy savings. While these programs have improved installation energy use, as they are currently structured, they favor older technologies that are well-established on the commercial market. This is especially the case for ESPCs, which are inherently risk averse. The private sector firms that enter into these contracts only do so if they are guaranteed to make a profit; as such, the energy improvements are done so with tried-and-tested technologies whose payback schedules and energy savings are well-defined. Many of these investments are also made with small profit margins. As such, companies are not willing to take risks on these contracts by using new and perhaps unproven technologies. Altering these programs to reduce the advantages provided to already commercialized products will encourage the acquisition of more innovative technologies on installations. One change could include a guaranteed return on investment (similar to that given on older technologies) for those developers proposing cutting-edge technologies. Another change could include giving first preference to innovations that come from public/private partnerships (incubators, energy hubs, etc.). Given DOD’s size and the fact that installations mirror U.S. infrastructure, the use of innovative technologies on its installations provides a clear demand signal to the developer.

## Politics

### AT: Sequestration Impact

#### No sequestration impact---most qualified expert

Korb 9/9 Lawrence Korb is a former assistant secretary of defense in the Reagan administration and is a senior fellow at the Center for American Progress. “Cuts Would Not Affect Security,” 2012, NYT, http://www.nytimes.com/roomfordebate/2012/09/09/how-big-should-the-defense-budget-be/cuts-would-not-affect-security

But the United States can afford defense cuts, **without undermining national securit**y, for four reasons:¶ First, the United States has just gone through an enormous defense buildup. The budget increased, in real terms, for an unprecedented 13 straight years between 1998 and 2012. Even during the Reagan buildup, defense spending grew for only four years before dropping back to more sustainable levels.¶ Second, the cuts being discussed are smaller than they seem. The first $500 billion **come from projected growth**, so the budget will fall by just $6 billion next year and then grow at about the same pace as inflation. **Even with sequestration, defense spending would be brought back** only **to its 2006 level** in real terms -- more than we spent on average under Presidents Ronald Reagan and George H. W. Bush.¶ Third, ending this indiscriminate growth will force the Pentagon to manage its funds more carefully. Over the past decade, the Pentagon squandered $46 billion on weapons it later canceled, and let half its procurement programs balloon beyond their original budgets.¶ Finally, we face a world with relatively few major threats. And even with sequestration-size cuts, **we would still account for more than 40 percent of the world’s defense spending**, and our allies would account for about half of the rest.

### AT: Resolve Impact

#### Best studies conclude resolve is meaningless

Tang 5 – Shiping Tang, associate research fellow and deputy director of the Center for Regional Security Studies at the Chinese Academy of Social Sciences in Beijing, January-March 2005, “Reputation, Cult of Reputation, and International Conflict,” Security Studies, Vol. 14, No. 1, p. 34-62

The general validity of reputation, however, has come under assault. Whereas in 1961 Glenn Snyder touted the virtue of drawing the line in places such as Quemoy and Matsu,4 he later all but acknowledged the flaw of his logic.5 Likewise, a decade after claiming that "a state can usually convince others of its willingness to defend its vital interests by frequently fighting for interests others believe it feels are less than vital,"6 Jervis was no longer so sure in 1982: "We cannot predict with great assurance how a given behavior will influence others' expectations of how the state will act in the future."7 This assault on reputation remains anathema for most politicians (and many political scientists). As statesman Henry Kissinger warned his colleagues, "No serious policymaker could allow himself to succumb to the fashionable debunking of 'prestige,' or 'honor\* or 'credibility.'"8 Judging from politicians' rhetoric and behavior, Kissinger's advice has been well taken. There seems to be a gap, therefore, between politicians' persistent obsession with reputation and scholars' increasing doubt about reputation's importance, and that gap is widening. Several more recent studies have taken the case against reputation (and credibility) even further.9 Compared to previous studies, these tend to be more systematic and better grounded empirically. They can be divided into two categories. The first group of work focuses on the impact of politicians' concern for reputation on state behavior and concludes that the concern for reputation has had a profound influence on state behavior in conflicts.10 The second group of work, taking politicians' belief in reputation as a fact, argues that this belief is unjustified because reputation in international conflicts is difficult, if not impossible, to develop. To put it differently, this line of work contends that reputation actually does not matter as much as politicians usually believe, if it matters at all.11

### Impact Defense---No Extinction---1NC

No extinction from climate change

NIPCC 11 – the Nongovernmental International Panel on Climate Change, an international panel of nongovernment scientists and scholars, March 8, 2011, “Surviving the Unprecedented Climate Change of the IPCC,” online: http://www.nipccreport.org/articles/2011/mar/8mar2011a5.html

In a paper published in Systematics and Biodiversity, Willis et al. (2010) consider the IPCC (2007) "predicted climatic changes for the next century" -- i.e., their contentions that "global temperatures will **increase by 2-4°C** and possibly beyond, sea levels will rise (~1 m ± 0.5 m), and atmospheric CO2 will increase by up to 1000 ppm" -- noting that it is "widely suggested that the magnitude and rate of these changes will result in many plants and animals going extinct," citing studies that suggest that "within the next century, over 35% of some biota will have gone extinct (Thomas et al., 2004; Solomon et al., 2007) and there will be extensive die-back of the tropical rainforest due to climate change (e.g. Huntingford et al., 2008)."

On the other hand, they indicate that some biologists and climatologists have pointed out that "many of the predicted increases in climate have **happened before**, in terms of both **magnitude and rate of change** (e.g. Royer, 2008; Zachos et al., 2008), and yet biotic communities have **remained remarkably resilient** (Mayle and Power, 2008) and in some cases **thrived** (Svenning and Condit, 2008)." But they report that those who mention these things are often "placed in the 'climate-change denier' category," although the purpose for pointing out these facts is simpl

y to present "a **sound scientific basis** for understanding biotic responses to the magnitudes and rates of climate change predicted for the future through using the **vast data resource** that we can exploit in fossil records."

Going on to do just that, Willis et al. focus on "intervals in time in the fossil record when atmospheric CO2 concentrations increased up to 1200 ppm, temperatures in mid- to high-latitudes increased by **greater than 4°C within 60 years**, and sea levels rose by up to 3 m higher than present," describing studies of past biotic responses that indicate "the scale and impact of the magnitude and rate of such climate changes on biodiversity." And what emerges from those studies, as they describe it, "is evidence for rapid community turnover, migrations, development of novel ecosystems and thresholds from one stable ecosystem state to another." And, most importantly in this regard, they report "there is **very little evidence for broad-scale extinctions** due to a warming world."

In concluding, the Norwegian, Swedish and UK researchers say that "based on such evidence we urge some **caution in assuming broad-scale extinctions** of species will occur due solely to climate changes of the magnitude and rate predicted for the next century," reiterating that "the fossil record indicates **remarkable biotic resilience** to wide amplitude fluctuations in climate."

### No Hagel Nomination

#### No Hagel---bipartisan opposition

Carlson 1-9 Margaret, Chicago Tribune, 2013, www.chicagotribune.com/site/newspaper/opinion/ct-perspec-0109-hagel-20130109,0,961154.story

Bipartisan opposition¶ Obama may think that Republicans will be less militant in defense of their foreign policy worldview than they were in defense of millionaires. Yet so far, they have set the alarm to DEFCON 1 for Hagel's nomination. Opposing it are hawks who resented Hagel's votes on Iraq (he voted for the war initially, though he gave a skeptical speech, and then against the troop surge) and the pro-Israel lobby, which resents him for a lot of reasons, especially his suggestion that the U.S. talk to Hamas.¶ Then there is the other side of the aisle: Because Hagel is not a Democrat, Democratic support for him is not a given. Those who count votes say there could be a dozen Democratic votes against Hagel. Democrats who don't like him have one main question: Why is the newly re-elected president nominating a Republican for one of the top four Cabinet posts? More to the point, now that Democrats have stolen a march on Republicans on national security issues, why is Obama turning to a Republican for defense? Obama might still be pining for bipartisanship, but congressional Democrats aren't.¶ One aspect of the opposition that appears to be truly bipartisan is from gay groups. Way back in the dark ages of 1998, Hagel called James C. Hormel, who eventually became ambassador to Luxembourg, "openly aggressively gay" and criticized his nomination.

#### Causes a political storm --- not enough votes to pass

ABC 1-7, “President Obama Names Chuck Hagel for Defense, John Brennan for CIA”, <http://abcnews.go.com/Politics/OTUS/president-obama-taps-chuck-hagel-defense-secretary-girds/story?id=18147109#.UOthvXexn_k>

But two weeks before his inauguration, Obama's selection of Hagel is expected to trigger a political storm over his confirmation in the Senate, where a bipartisan group of critics has already lined up against the pick.¶ "This is an in your face nomination by the president to all of us who are supportive of Israel," Sen. Lindsey Graham, R-S.C., told CNN on Sunday. "I don't know what his management experience is regarding the Pentagon -- little, if any, so I think it's an incredibly controversial choice."¶ The criticism stems from Hagel's controversial past statements on foreign policy, including a 2008 reference to Israel's U.S. supporters as "the Jewish lobby," public encouragement of negotiations between the United States, Israel and Hamas, a Palestinian group the State Department classifies as terrorists, and his stance on how to deal with Iran.¶ "Hagel has consistently been against economic sanctions to try to change the behavior of the Islamist regime, the radical regime in Tehran, which is the only way to do it, short of war," Sen. Joe Lieberman, I-Conn., said last month.¶ The Nebraska Republican has also drawn fire for his outspoken opposition to the 2003 U.S.-led war in Iraq and the subsequent troop "surge" ordered by then-President George W. Bush in 2007, which has been credited with helping bring the war to a close.¶ On the left, gay rights groups have criticized Hagel for comments he made in 1998 disparaging then-President Bill Clinton's nominee for U.S. Ambassador to Luxembourg James Hormel as "openly, aggressively gay." Hagel has since apologized for the remark as "insensitive."¶ In an interview with his hometown paper, the Lincoln Journal Star, Hagel today launched a rebuttal to critics, whom he said have "completely distorted his record." He said the confirmation process will allow him to show his "unequivocal, total support for Israel" and support for sanctions on Iran.¶ Obama also laid out a vigorous defense of Hagel's record, in spite of the controversial remarks, praising him as a "champion of troops, veterans and their families," noting his leadership at the USO and Department of Veterans Affairs and on Capitol Hill pushing for a post-9/11 GI bill.¶ Giving nod to some of Hagel's more controversial views, Obama even praised Hagel's "willingness to speak his mind even if it wasn't popular, defied conventional wisdom."¶ Top Senate Democrats tell ABC News there is no guarantee Hagel will win confirmation and that, as of right now, there are enough Democratic Senators with serious concerns about Hagel to put him below 50 votes.

### 1AR XT – DOD Shields

#### No politician will oppose the plan---helps troops

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

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

#### Plan shields controversy

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 technology, for example, in an effort to find ways to reduce one of its largest budget items, energy costs.