# 1AC

### 1AC – Hegemony Advantage

**CONTENTION 1: HEGEMONY**

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

**Cyber-attack’s coming now---actors are probing US electricity weaknesses**

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

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

**Key military operations depend on a vulnerable grid---SMRs are essential to prevent cyber-terrorism and grid collapse**

**Robitaille 12** George E, Department of Army Civilian, March 21, "Small Modular Reactors: The Army’s Secure Source of Energy?", [www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA561802](http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA561802)

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

**Grid attack takes 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.

**Old defense doesn’t apply---Stuxnet changed the game**

**Gross 11** Michael Joseph, Vanity Fair contributing editor, he covers topics including politics, technology, and national security, has also written extensively for The New York Times, The Boston Globe, and GQ, attended Williams College, and later studied at Princeton Theological Seminary. After graduating, he wrote speeches for Massachusetts Governor William Weld, “A Declaration of Cyber-War”, April, http://www.vanityfair.com/culture/features/2011/04/stuxnet-201104?currentPage=all

Regardless of how well it worked, there is no question that Stuxnet is something new under the sun. At the very least, it is a blueprint for a new way of **attacking industrial-control systems**. In the end, the most important thing now publicly known about Stuxnet is that Stuxnet is **now publicly known.** That knowledge is, on the simplest level, a warning: **America’s own critical infrastructure is a sitting target for attacks like this**. That aside, if Stuxnet really did attack Iran’s nuclear program, it could be called the first unattributable act of war. The implications of that concept are confounding. Because cyber-weapons pose an almost **unsolvable problem of sourcing**—who pulled the trigger?—war could evolve into something **more and more like terror**. Cyber-conflict makes military action more like a **never-ending game of uncle**, where the fingers of weaker nations are perpetually bent back. The wars would often be secret, waged by members of anonymous, elite brain trusts, none of whom would ever have to look an enemy in the eye. For people whose lives are connected to the targets, the results could be **as catastrophic as a bombing** **raid, but would be even more disorienting**. People would suffer, but would never be certain whom to blame.¶ **Stuxnet is the Hiroshima of cyber-war**. That is its true significance, and all the speculation about its target and its source should not blind us to that larger reality. **We have crossed a threshold, and there is no turning back**.

#### SMRs on bases secures them from attack

Galloway 10 Brigadier General Gerald E, Former Dean of the Academic Board, US Military Academy and Dean of the Faculty and Academic Programs, Industrial College of the Armed Forces, "On the Need for Creative Energy Solutions", Summer, www.cna.org/sites/default/files/research/WEB%2007%2027%2010%20MAB%20Powering%20America%27s%20Economy.pdf

Based on the progress made in technology, and on the findings of a study he chaired for the National Academies, General Galloway believes it may be time for the Army to revisit the initiative and consider paradigm shifting technologies like small, modular nuclear reactors. “In 1999, our report on logistics for the future Army recommended looking once again into small nuclear plants. It found that now there are additional benefits, like producing hydrogen for fuel cells. Today, small nuclear reactors are being marketed in the U.S. It’s probably time to think more about this,” General Galloway says. “No one’s envisioned bringing them out in combat zones, but they could provide energy in theater at large staging areas.”¶ General Galloway sees a special role for DOD in demonstrating these reactors in the United States. “The challenge at many military facilities is that they’re tied to the grid. We’ve seen the grid go down. At the same time, energy demands are rising. Putting a small reactor on a military installation not only provides a reliable and sustainable power source and a test bed to define its long term utility, but also places the plant in a secure location. Within the United States, it’s hard to find a more physically secure place than a military installation,” says General Galloway. “If the tests go well on bases in the United States, these small reactors could be used to support overseas military operations or disaster recovery activities.”

**Scenario 2---Drones**

**Grid shutdown makes drones ineffective**

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

A final challenge is grid vulnerability. DoD’s reliance on a fragile commercial grid to deliver electricity to its 500-plus installations places the continuity of critical missions at risk. Most installations lack the ability to manage their demand for and supply of electrical power and are thus vulnerable to intermittent and/or prolonged power disruption due to natural disasters, cyberattacks and sheer overload of the grid. **Because** of **U.S. combat forces’** increasing **reliance on “reachback” support from installations in the U**nited **S**tates, power failures at those installations could adversely affect our power projection and homeland defense mission capability. For example, we operate Predator drones in Afghanistan from a facility in Nevada and analyze battlefield intelligence at data centers here at home. This means that **an energy threat to bases at home can be a threat to operations abroad**.

**Drones maintain heg--- prevents escalation**

**Bruntstetter 12** Daniel, Assistance Professor of Political Science at the School of Social Sciences at the University of California, "Drones: The Future of Warfare?", April 10, www.e-ir.info/2012/04/10/drones-the-future-of-warfare/

Since President Obama took office, the use of and hype surrounding drones has greatly increased. Obama has conducted more than three times as many drone strikes per year compared to his predecessor in the White House.[1] The increase use of drones points to a potential revolution in warfare, or at least a shift in the perspective of how wars will be fought in the future. As robotics expert P.W. Singer argues, “the introduction of unmanned systems to the battlefield doesn’t change simply how we fight, but for the first time changes who fights at the most fundamental level. It transforms the very agent of war, rather than just its capabilities.”[2]¶ The three major reasons **drones are seen as the future of warfare** are: **they remove the risk to our soldiers, they make fewer mistakes than other weapons platforms, and technology will continue to improve such that drones become even more precise, efficient, and infallible in the future, thus rendering less precise, efficient and fallible human forms of war obsolete**. Drones are thus seen as marking “a step forward in humanitarian technology,” and viewed as “a weapon of choice for future presidents, future administrations, in **future conflicts and circumstances of self-defense and vital national security** of the United States.”[3]¶ Yet, there has been much criticism of these assertions. Journalists challenge the claim that there are diminished civilian deaths from drone strikes, while just war scholars suggest that drones loosen the moral restraints on the use of force and legal scholars grapple with the relation between drones and international law.[4] Notwithstanding these ethical and legal challenges, and despite what advocates say about their place in the future of armed combat, drones are, like any weapons platform, inherently limited in what they can do.¶ In this brief article, I make three claims to contextualize the idea that **drones are the future of war** to shed light on the circumscribed role they might play in the foreseeable future. First, that drones are an improvement – in terms of providing surveillance capabilities and satisfying the rules of war – compared to previous technology. Their technical advantages (loitering capacity, removal of risk to pilots, and precision) **make them an important addition to any military arsenal**. Second, however, drones are nevertheless limited in their potential. While perhaps the best option to fight Al Qaeda, they will not, due to their technical and tactical limitations, fully replace weapons with greater destructive and evasive capabilities because they are not equipped to respond to all scenarios within the subset of international crises. Third, the extent to which drones are the weapon of the future, they will not, despite the imagination of some pundits, remove entirely the human element from the future of war. Rather, humans, despite the hype surrounding drones, remain an essential piece of the future of war, and are subject to the inevitable risks associated with war.¶ Technical Advantages of Drones¶ The advantages of drones compared to other military options are well publicized, and fall into two categories.[5] In terms of surveillance, drones are capable of slipping across international borders with relative ease without putting human personnel at risk. Their ability to loiter over targets allows them to observe “patterns of life” to provide surveillance data 24/7, identify and track potential targets, and determine the best time to strike to avoid civilian casualties.[6] This leads to the second advantage: drones are claimed to be highly effective at satisfying the rules of war.¶ In terms of lethal use of force, the pinpoint accuracy of their missiles and computer software that models the blast area of each proposed strike greatly reduces collateral damage compared to other weapons systems, and potentially could even **eliminate it.** In the words of one proponent, **drones provide a “limited, pinprick, covert strike” in order “to avoid a wider war**.”[7] Moreover, the removal of pilots from the zone of combat – drones are operated from a facility well removed from where the fighting takes place –arguably **eliminates the threat to our soldiers** and allows drone operators to make better targeting decisions because they do not fear for their own safety. All of this adds up to considerably diminished number of civilian casualties. According to one scholar, **these advantages lead to an “ethical obligation” to employ drones** instead of other more risky tactics. [8]¶ These advantages have, thus far, dictated the use of drones by the United States. Despite a UN Special Committee Review on drones in 2009, and two hearings hosted by the U.S. House of Representatives in 2010 to discuss the moral and legal implications of drones, they have been the weapon of choice in Obama’s “war on Al Qaeda.” Yet, it is important to remember that this success in fighting terrorism should not be taken as evidence of drone effectiveness in all situations.

**Drones defeat terrorists and stop militant rise in Pakistan**

**Nadim 12** Hussain, visiting scholar at the Woodrow Wilson Center, "How Drones Changed the Game in Pakistan", August 8, nationalinterest.org/how-drones-changed-the-game-pakistan-7290

Regardless of what the news agencies in Pakistan claim about the negative effects of drone strikes**, the weapon is proving to be a game changer for the U.S. war on terrorism**. And surprisingly, the Pakistani Army quietly admits to this fact. Just the way Stinger missiles shifted the balance of power in favor of the United States in the 1980s, drones are producing the same results.¶ The critics of unmanned strikes, who claim that drones are contributing to growing radicalization in Pakistan, haven’t looked around enough—or they **would realize that much of the radicalization already was established** by the Taliban in the 1990s. The real tragedy is that it is acceptable for the Taliban to radicalize and kill, but it is considered a breach of sovereignty for the United States, in pursuit of those radicalizing Pakistan’s people, to do the same.¶ **There is so much protest over the drones because the media reports about them are biased**. Although people on ground in war zones contend that the drone strikes have very few civilian casualties and, with time, have become extremely precise, the media presents quite a different story to boost its ratings.¶ Many in Pakistan, especially in the army, understand the positive impact of this weapon. Drones are coming in handy for two reasons: **their precision and psychological effect**. Many analysts of this subject have been concerned only with the military aspect, such as whether or not drones are precise enough and the casualties they incur. But part of what works in favor of the United States is the psychological impact—the fear that drones have instilled in the militants. The fact that the United States might strike day or night, inside the militant compound or outside while traveling in the convoys, **works to deter militants and restrict their operations**. This tilts the balance of power in favor of the United States.¶ Most of the people in the Pakistani Army whom I interviewed on the subject were positive about the drone strikes and their direct correlation with a decrease in terrorist attacks in Pakistan. The majority focused on the psychological impact of the drones and how they **have put militants on the run**, forcing them to sleep under trees at night, though it must be said that army officials showed some concern about cases in which the same psychological impact is experienced by civilians.¶ Locals I talked to are frustrated over the fear that they might get hit by a drone if the militants are hiding in their neighborhood. But this frustration may have a positive impact as it motivates civilians to flush out and close doors to militants who seek refuge in their areas.¶ Surprisingly, there isn’t as much anti-Americanism as one would suspect in areas where the United States is conducting drone strikes**, largely because the locals are fed up with the influx of militants** in their areas **and have suffered because of terrorism**. However, urban centers, which have suffered the least from terrorism, are far more radicalized and anti-American. Hence, we see large anti-drone rallies in the cities of Punjab, where people have little first-hand experience with drones. The anti-American lot in these places will start a rally for any reason at all as long as they get to burn a few American flags.

**Terrorism causes extinction**

**Hellman 8** [Martin E. Hellman, emeritus prof of engineering @ Stanford, “Risk Analysis of Nuclear Deterrence” SPRING 2008 THE BENT OF TAU BETA PI, http://www.nuclearrisk.org/paper.pdf]

The threat of nuclear terrorism looms much larger in the public’s mind than the threat of a full-scale nuclear war, yet this article focuses primarily on the latter. An explanation is therefore in order before proceeding. A terrorist attack involving a nuclear weapon would be a catastrophe of immense proportions: “A 10-kiloton bomb detonated at Grand Central Station on a typical work day would likely kill some half a million people, and inflict over a trillion dollars in direct economic damage. America and its way of life would be changed forever.” [Bunn 2003, pages viii-ix]. The likelihood of such an attack is also significant. Former Secretary of Defense William Perry has estimated the chance of a nuclear terrorist incident within the next decade to be roughly 50 percent [Bunn 2007, page 15]. David Albright, a former weapons inspector in Iraq, estimates those odds at less than one percent, but notes, “We would never accept a situation where the chance of a major nuclear accident like Chernobyl would be anywhere near 1% .... A nuclear terrorism attack is a low-probability event, but we can’t live in a world where it’s anything but extremely low-probability.” [Hegland 2005]. In a survey of 85 national security experts, Senator Richard Lugar found a median estimate of 20 percent for the “probability of an attack involving a nuclear explosion occurring somewhere in the world in the next 10 years,” with 79 percent of the respondents believing “it more likely to be carried out by terrorists” than by a government [Lugar 2005, pp. 14-15]. I support increased efforts to reduce the threat of nuclear terrorism, but that is not inconsistent with the approach of this article. Because terrorism is one of the potential trigger mechanisms for a full-scale nuclear war, the risk analyses proposed herein will include estimating the risk of nuclear terrorism as one component of the overall risk. If that risk, the overall risk, or both are found to be unacceptable, then the proposed remedies would be directed to reduce which- ever risk(s) warrant attention. Similar remarks apply to a number of other threats (e.g., nuclear war between the U.S. and China over Taiwan). his article would be incomplete if it only dealt with the threat of nuclear terrorism and neglected the threat of full- scale nuclear war. If both risks are unacceptable, an effort to reduce only the terrorist component would leave humanity in great peril. In fact, society’s almost total neglect of the threat of full-scale nuclear war makes studying that risk all the more important. The cosT of World War iii The danger associated with nuclear deterrence depends on both the cost of a failure and the failure rate.3 This section explores the cost of a failure of nuclear deterrence, and the next section is concerned with the failure rate. While other definitions are possible, this article defines a failure of deterrence to mean a full-scale exchange of all nuclear weapons available to the U.S. and Russia, an event that will be termed World War III. Approximately 20 million people died as a result of the first World War. World War II’s fatalities were double or triple that number—chaos prevented a more precise deter- mination. In both cases humanity recovered, and the world today bears few scars that attest to the horror of those two wars. Many people therefore implicitly believe that a third World War would be horrible but survivable, an extrapola- tion of the effects of the first two global wars. In that view, World War III, while horrible, is something that humanity may just have to face and from which it will then have to recover. In contrast, some of those most qualified to assess the situation hold a very different view. In a 1961 speech to a joint session of the Philippine Con- gress, General Douglas MacArthur, stated, “Global war has become a Frankenstein to destroy both sides. … If you lose, you are annihilated. If you win, you stand only to lose. No longer does it possess even the chance of the winner of a duel. It contains now only the germs of double suicide.” Former Secretary of Defense Robert McNamara ex- pressed a similar view: “If deterrence fails and conflict develops, the present U.S. and NATO strategy carries with it a high risk that Western civilization will be destroyed” [McNamara 1986, page 6]. More recently, George Shultz, William Perry, Henry Kissinger, and Sam Nunn4 echoed those concerns when they quoted President Reagan’s belief that nuclear weapons were “totally irrational, totally inhu- mane, good for nothing but killing, possibly destructive of life on earth and civilization.” [Shultz 2007] Official studies, while couched in less emotional terms, still convey the horrendous toll that World War III would exact: “The resulting deaths would be far beyond any precedent. Executive branch calculations show a range of U.S. deaths from 35 to 77 percent (i.e., 79-160 million dead) … a change in targeting could kill somewhere between 20 million and 30 million additional people on each side .... These calculations reflect only deaths during the first 30 days. Additional millions would be injured, and many would eventually die from lack of adequate medical care … millions of people might starve or freeze during the follow- ing winter, but it is not possible to estimate how many. … further millions … might eventually die of latent radiation effects.” [OTA 1979, page 8] This OTA report also noted the possibility of serious ecological damage [OTA 1979, page 9], a concern that as- sumed a new potentiality when the TTAPS report [TTAPS 1983] proposed that the ash and dust from so many nearly simultaneous nuclear explosions and their resultant fire- storms could usher in a nuclear winter that might erase homo sapiens from the face of the earth, much as many scientists now believe the K-T Extinction that wiped out the dinosaurs resulted from an impact winter caused by ash and dust from a large asteroid or comet striking Earth. The TTAPS report produced a heated debate, and there is still no scientific consensus on whether a nuclear winter would follow a full-scale nuclear war. Recent work [Robock 2007, Toon 2007] suggests that even a limited nuclear exchange or one between newer nuclear-weapon states, such as India and Pakistan, could have devastating long-lasting climatic consequences due to the large volumes of smoke that would be generated by fires in modern megacities. While it is uncertain how destructive World War III would be, prudence dictates that we apply the same engi- neering conservatism that saved the Golden Gate Bridge from collapsing on its 50th anniversary and assume that preventing World War III is a necessity—not an option.

**Militant rise in Pakistan causes nuclear war**

**Pitt 9** William, a New York Times and internationally bestselling author of two books: "War on Iraq: What Team Bush Doesn't Want You to Know" and "The Greatest Sedition Is Silence”, 5/8, “Unstable Pakistan Threatens the World,” http://www.arabamericannews.com/news/index.php?mod=article&cat=commentary&article=2183

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But a suicide bomber in Pakistan rammed a car packed with explosives into a jeep filled with troops today, killing five and wounding as many as 21, including several children who were waiting for a ride to school. Residents of the region where the attack took place are fleeing in terror as gunfire rings out around them, and government forces have been unable to quell the violence. Two regional government officials were beheaded by militants in retaliation for the killing of other militants by government forces. As familiar as this sounds, it did not take place where we have come to expect such terrible events. This, unfortunately, is a whole new ballgame. It is part of another conflict that is brewing, one which puts what is happening in Iraq and Afghanistan in deep shade, and which represents a grave and growing threat to us all. **Pakistan is now trembling on the edge of violent chaos, and is doing so with nuclear weapons in its hip pocket, right in the middle of one of the most dangerous neighborhoods in the world.** The situation in brief: Pakistan for years has been a nation in turmoil, run by a shaky government supported by a corrupted system, dominated by a blatantly criminal security service, and threatened by a large fundamentalist Islamic population with deep ties to the Taliban in Afghanistan. All this is piled atop an ongoing standoff with neighboring India that has been the center of political gravity in the region for more than half a century. The fact that Pakistan, and **India, and Russia, and China all possess nuclear weapons** and share the same space means any ongoing or escalating violence over there has the real potential to crack open the very gates of Hell itself. Recently, the Taliban made a military push into the northwest Pakistani region around the Swat Valley. According to a recent Reuters report: The (Pakistani) army deployed troops in Swat in October 2007 and used artillery and gunship helicopters to reassert control. But insecurity mounted after a civilian government came to power last year and tried to reach a negotiated settlement. A peace accord fell apart in May 2008. After that, hundreds — including soldiers, militants and civilians — died in battles. Militants unleashed a reign of terror, killing and beheading politicians, singers, soldiers and opponents. They banned female education and destroyed nearly 200 girls' schools. About 1,200 people were killed since late 2007 and 250,000 to 500,000 fled, leaving the militants in virtual control. Pakistan offered on February 16 to introduce Islamic law in the Swat valley and neighboring areas in a bid to take the steam out of the insurgency. The militants announced an indefinite cease-fire after the army said it was halting operations in the region. President Asif Ali Zardari signed a regulation imposing sharia in the area last month. But the Taliban refused to give up their guns and pushed into Buner and another district adjacent to Swat, intent on spreading their rule. The United States, already embroiled in a war against Taliban forces in Afghanistan, must now face the possibility that Pakistan could collapse under the mounting threat of Taliban forces there. Military and diplomatic advisers to President Obama, uncertain how best to proceed, now face one of the great nightmare scenarios of our time. "Recent militant gains in Pakistan," reported The New York Times on Monday, "have so alarmed the White House that the national security adviser, Gen. James L. Jones, **described the situation as 'one of the very most serious problems we face**.'" "Security was deteriorating rapidly," reported The Washington Post on Monday, "particularly in the mountains along the Afghan border that harbor al-Qaeda and the Taliban, intelligence chiefs reported, and there were signs that those groups were working with indigenous extremists in Pakistan's populous Punjabi heartland. The Pakistani government was mired in political bickering. The army, still fixated on its historical adversary India, remained ill-equipped and unwilling to throw its full weight into the counterinsurgency fight. But despite the threat the intelligence conveyed, Obama has only limited options for dealing with it. Anti-American feeling in Pakistan is high, and a U.S. combat presence is prohibited. The United States is fighting Pakistan-based extremists by proxy, through an army over which it has little control, in alliance with a government in which it has little confidence." It is believed Pakistan is currently in possession of between 60 and 100 nuclear weapons. Because Pakistan's stability is threatened by the wide swath of its population that shares ethnic, cultural and religious connections to the fundamentalist Islamic populace of Afghanistan, fears over what could happen to those nuclear weapons if the Pakistani government collapses are very real. "As the insurgency of the Taliban and Al Qaeda spreads in Pakistan," reported the Times last week, "senior American officials say they are increasingly concerned about new vulnerabilities for Pakistan's nuclear arsenal, including the potential for **militants to snatch a weapon** in transport or to insert sympathizers into laboratories or fuel-production facilities. In public, the administration has only hinted at those concerns, repeating the formulation that the Bush administration used: that it has faith in the Pakistani Army. But that cooperation, according to officials who would not speak for attribution because of the sensitivity surrounding the exchanges between Washington and Islamabad, has been sharply limited when the subject has turned to the vulnerabilities in the Pakistani nuclear infrastructure." "The prospect of turmoil in Pakistan sends shivers up the spines of those U.S. officials charged with keeping tabs on foreign nuclear weapons," reported Time Magazine last month. "Pakistan is thought to possess about 100 — the U.S. isn't sure of the total, and may not know where all of them are. Still, if Pakistan collapses, the U.S. military is primed to enter the country and secure as many of those weapons as it can, according to U.S. officials. Pakistani officials insist their personnel safeguards are stringent, but a sleeper cell could cause big trouble, U.S. officials say." In other words, a shaky Pakistan spells trouble for everyone, especially if America loses the footrace to secure those weapons in the event of the worst-case scenario. **If** Pakistani **militants** ever **succeed in toppling the government**, several very dangerous events could happen at once. Nuclear-armed **India could be galvanized into military action of some kind, as could nuclear-armed China or nuclear-armed Russia**. If the Pakistani government does fall, and all those Pakistani nukes are not immediately accounted for and secured, the specter (or reality) of **loose nukes falling into the hands of terrorist organizations could place the entire world on a collision course with unimaginable disaster**. We have all been paying a great deal of attention to Iraq and Afghanistan, and rightly so. The developing situation in Pakistan, however, needs to be placed immediately on the front burner. The Obama administration appears to be gravely serious about addressing the situation. So should we all.

**Scenario 3---Net-Centric Warfare**

**Adversaries attack information systems---wrecks netwar capabilities**

**DSB 7** Defense Science Board, Federal Advisory Committee established to provide independent

advice to the Secretary of Defense, "2006 Summer Study on Information Management for Net-Centric Operations", April, www.acq.osd.mil/dsb/reports/ADA467538.pdf

The military's ever increasing reliance on information networks and its ability to provide wider access to information to support collaboration has transformed and improved the forces' capabilities and effectiveness in executing operations. **Future challenges** and the need to maintain adequate levels of security, integrity, and reliability will place **new demands** on information networks, processes, and personnel. The Defense Science- Board was asked to assess the department's strategy, scope, and progress toward achieving a robust and adaptive net-centric information management capability for the Department of Defense (DOD).¶ It is well accepted that improved information at all levels will improve operational effectiveness, but, of course, that comes with some risk and penalties. The task force was asked to examine the operational value of the proposed information network and to pay special attention to the emerging missions it is designed to support—that is, counterinsurgency, counterterrorism, stabilization and reconstruction, response to catastrophic disasters, and defense of the nation against attack.¶ Over the past five years the Assistant Secretary of Defense for Networks and Information Integration (ASD [Nil]) and Chief Information Officer (CIO) organizations within DOD have done a significant and remarkable job assembling an underlying framework and architecture based on commercial Internet Protocol (IP) technology, which has the potential to bring the department, at all levels of the enterprise, significant information capability and operational value. The task force was charged with evaluating the framework, architecture, processes, and organizational structures being pursued to deliver the power of information networks to the DOD enterprise, as well as to external partners.¶ Risks are associated with execution of programs to implement the network, as well as with meeting quality of service, availability, security, and integrity expectations for all missions and users. The task force was to assess cost/risk trades and technical network issues associated with the enterprise. Lastly, the task force considered knowledge management in support of department goals. "Googling" for access to particular information is now a familiar activity, but it is not the appropriate application for the war fighter in the tactical battlefield who is seeking information in the middle of a firefight. Therefore, identifying effective methods to provide robust, useful information at all levels—from strategic decision-makers to the tactical user—was a major focus of this study. The focus would be on information discovery, sharing, collaboration, visualization, comprehension, and storage—all of which support the distribution of knowledge that will ultimately support the missions and users in making effective decisions.¶ The following operational scenarios derived from the threat assessment prepared for the most recent Quadrennial Defense Review were the basis for the task force:¶ ■ prevent and protect the United States against catastrophic attack¶ ■ conduct large-scale counter-insurgency operations including¶ stabilization and reconstruction¶ ■ conduct global distributed, small-scale operations including¶ counter-terrorism and humanitarian relief¶ ■ enable large-scale operations against near peer adversaries¶ As depicted in figure 1, these scenarios today have a very different battle management paradigm with a stealthy enemy dispersed in a civilian urban setting, as opposed to clearly defined, uniformed combatants and battle lines for engagement as in previous wars. Under all scenarios a sophisticated and "state of the art" information management capability is required. Information systems technology has proliferated across the globe, driven primarily by the global economy and the Internet. The United States no longer holds a significant advantage in information systems technology. Today, more hardware and software is being built offshore than in the U.S., and that percentage continues to grow rapidly.¶ Potential adversaries are technically very capable and are able to move information rapidly**. Adversaries also clearly understand the importance of information to winning in combat and will therefore commit themselves to attacking U.S. command and control, communications, and information systems**. These attacks may be kinetic attacks and/or non-kinetic attacks. The threat to the information system will continue to evolve as globalization and the information revolution force changes in structure and technology.¶ In our lifetimes, the information revolution has moved the world from a place where data can be moved at about 30 words per minute over field phones and 60 words per minute over radios to one in which it can be moved at roughly 1.5 trillion words per minute over wideband data links. At the same time, data acquisition through means such as satellites and data storage capabilities has increased at a similar rate. The impact of this revolution on information management capability on the national security environment is enormous. **It would be especially detrimental if there is not a U.S. national** and DOD **commitment to keep pace with** almost "**speed of light" advancements in information technology**.¶ Globalization has radically changed the national security paradigm. Movement has been from a relatively isolated environment of the Industrial Age of the 20\* century, where security meant "defense" and "containment," to the information age of the 21" century, a much more integrated environment with a smaller world (due to speed of light transmissions) where information is shared globally in very near real time, and national security is more complex and dynamic. Maintaining "national security" is no longer just a matter of protecting international borders. For example, "borders" in **cyberspace must also be protected**. At the same time, there are more active global hotspots; the threat is increasingly using asymmetric tactics; and interoperability is still an issue with U.S. forces, as well as with many of U.S. coalition partners.¶ The evolving threat characteristics considered during the course of the study include:¶ ■ dynamic and ever changing¶ ■ highly mobile and regularly move across international borders¶ ■ highly distributed¶ ■ stealthy¶ ■ adaptive and amorphous¶ ■ asymmetric¶ ■ when viewed in isolation—low value targets¶ **Adversaries have become very skilled at neutralizing U.S. operational advantages**. Two critical concerns evolved during the study:¶ 1. U.S. adversaries are not only using their many skills in information technology to move information rapidly, but also they may develop a significant capability to **attack U.S. information systems**.

**Netwar is critical to hegemony**

**Arquilla 10** John, Professor of defense analysis at the U.S. Naval Postgraduate School, MARCH/APRIL 2010, “The New Rules of War”, http://www.foreignpolicy.com/articles/2010/02/22/the\_new\_rules\_of\_war

The irony, however, is that the U.S. military has never been in a better position to gain acceptance for truly transformational change. Neither party in Congress can afford to be portrayed as standing in the way of strategic progress, and so, whatever the Pentagon asks for, it gets. As for defense contractors, far from driving the agenda, they are much too willing to give their military customers exactly what they demand (rather than, perhaps, something better). If the U.S. armed forces call for smaller, smarter weapons and systems to support swarming, they will get them. Beyond the United States, other countries' security forces are beginning to think along the lines of "many and small," are crafting better ways to "find," and are learning to swarm. Chinese naval thought today is clearly moving in this direction. Russian ground forces are, too. Needless to say, terrorist networks are still in the lead, and not just al Qaeda. Hezbollah gave quite a demonstration of all three of the new rules of war in its summer 2006 conflict with Israel, a virtual laboratory test of nation versus network -- in which the network more than held its own. For the U.S. military, failing a great leap forward in self-awareness of the need for radical change, a downward budgetary nudge is probably the best approach -- despite President Barack Obama's unwillingness to extend his fiscal austerity program to security-related expenditures. This could take the form of a freeze on defense spending levels, to be followed by several years of, say, 10 percent annual reductions. To focus the redesign effort, a moratorium would be declared on all legacy-like systems (think aircraft carriers, other big ships, advanced fighters, tanks, etc.) while they are subjected to searching review. It should not be assumed that the huge sums invested in national defense have been wisely spent. To most Americans who think that being strong on defense means devoting more resources and building bigger systems, this suggestion to cut spending will sound outrageous. But being smarter about defense might lower costs even as effectiveness improves. This pattern has held throughout the transformations of the last few decades, whether in farming or in industry. Why should the military be exempt? There's real urgency to this debate. Not only has history not ended with the Cold War and the advent of commerce-driven globalization, but conflict and violence have persisted -- even grown -- into a new postmodern scourge. Indeed, it is ironic that, in an era in which the attraction to persuasive "soft power" has grown dramatically, coercive "hard power" continues to dominate in world affairs. This is no surprise in the case of rogue nations hellbent on developing nuclear arsenals to ensure their security, nor when it comes to terrorist networks that think their essential nature is revealed in and sustained by violent acts. But this primary reliance on coercive capabilities is also on display across a range of countries great and small, most notably the United States, whose defense policy has over the past decade largely become its foreign policy. From the wars in Iraq and Afghanistan, to simmering crises with North Korea and Iran, and on to longer-range strategic concerns about East Asian and Central European security, the United States today is heavily invested in hard-power solutions. And it will continue to be. But if the radical adjustments in strategy, organization, and doctrine implied by the new rules of war are ignored, Americans will go on spending more and getting less when it comes to national defense. Networks will persist until they have the capability to land nuclear blows. Other countries will leapfrog ahead of the United States militarily, and concepts like "deterrence" and "containment" of aggression **will blow away like leaves in the wind**. So it has always been. Every era of technological change has resulted in profound shifts in military and strategic affairs. History tells us that these developments were inevitable, but soldiers and statesmen were almost always too late in embracing them -- and tragedies upon tragedies ensued. There is still time to be counted among the exceptions, like the Byzantines who, after the fall of Rome, radically redesigned their military and preserved their empire for another thousand years. The U.S. goal should be to join the ranks of those who, in their eras, caught glimpses of the future and acted in time to shape it, **saving the world from darkness**.

**Independently, NCW prevents all future conflict**

**Chang-hee 5** Chang-hee Nam, professor of Inha University, South Korea, who formerly worked for the Korea Institute f or Defense Analysis, “The Realignment of the USFK in the Military Transformation and South Korea's Defense Reform 2020”, <http://www.nids.go.jp/english/event/symposium/pdf/2005/e2005_05.pdf>

By contrast with the LPP, the relocation of the 2 nd Infantry Division to the OsanPyeongtaek area has more to do with a fundamental change in the Pentagon’s global strategy. The foremost locomotive behind the structural realignment of the USFK comes from Secretary Rumsfeld’s military transformation initiative, which gained more salience in the Pentagon’s war on terrorism after the September 11 attacks. Secretary of Defense Rumsfeld strongly argues that the U.S. military should adapt to new threats coming from terrorist groups who might use weapons of mass destruction. He believes that the old-fashioned basing of the U.S. forces during the Cold War-era has now become obsolete and can no longer help defend American interests from attacks in unexpected times and places. He contends, “The Pentagon decided to move away from the old ‘threat-based’ strategy that had dominated our country’s defense planning for the early half a century and adopt a new ‘capabilities-based’ approach -- one that focuses less on who might threaten us, or where, and more on how we might be threatened and what is needed to deter and defend against such threats.” 4 The disastrous damage inflicted on Americans by the unprecedented attacks of September 11 awakened the American military thinkers to devise genuinely new ways of thinking. The White House hinted that America now needs a so-called third round of transformation in constructing its national security strategy -- as it did after the British invasion of the early 19 th century and at the advent of the Cold War. 5 The U.S. military now needs to reconfigure its military machine to be able to deal with elusive enemies whose activities are small in size, transnational and ubiquitous. The proponents of Revolution in Military Affairs (RMA) in the American military provided a timely solution for adapting to the new types of threats. Notably, the RMA refers to a fundamental transformation in military strategy and operations that transpired in the process of amplifying combat effectiveness by linking Intelligence, Surveillance and Reconnaissance (ISR) and Precision Guided Munitions (PGMS) with highly sophisticated C4I (Command and Control, Communication, Computer and Intelligence). This network-centric system-of-systems, which gathers accurate information through sophisticated battlefield awareness capabilities, relaying it to the shooter, has been proving its effectiveness in the most recent U.S.-led wars. Arthur Cebrowski, a retired admiral and a former Director of the Office of Force Transformation in the Pentagon, came up with the new concept of “Network-Centric Warfare (NCW).” Cebrowski’s men **suggested a network-centric warfare for dramatically amplified war fighting effectiveness,** which could be applied to suffocating by maximum vigilance of the terrorist groups to neutralization. A global network of real-time sensor-shooter linkage supported by agile and mobile forces dispersed around key nodes would successfully discourage any country to allow a haven for terrorist groups. “Network-centric warfare is characterized by the ability of geographically dispersed forces to attain a high level of shared battle-space awareness that is exploited to achieve massed effects swiftly without the physical massing of forces required in the past.” 6 This global rapid response system necessitates the reduction and relocation of forces still surrounding the Russian Federation following the old containment strategy. The Pentagon needed to find relevant force projection space to replace that of the past in its reconfiguration of the U.S. ground forces stationed around the globe. In the eyes of the Pentagon’s transformation planners, large contingents of U.S. ground forces on the Korean peninsula, equipped with heavily armored vehicles, impeding mobility, look somewhat outdated and less adaptable to the requirements of new missions in America’s war on terrorism. Other encouraging changes include enhanced lift capabilities and improved deployability of Rapid Deployment Forces (RDF). Transport aircraft like the C-17 now allow for rapid airlift of soldiers and even armored vehicles, reducing the need for advance deployment of large-scale ground forces. The Stryker Brigade Combat Team (SBCT), a crucial component of the Army’s multifunctional Unit of Action (UA) under future chain of command such as UEx and UEy, will replace the army brigades. The future combat team of light infantry troops can be dispatched together with light armored vehicles to any part of the world. This attests to the desire of the U.S. Department of Defense for a global basing system that would reshape U.S. troops overseas to be smaller, modular, mobile, and thus adaptable to carrying out network-centric warfare against scattered and invisible enemies. Rumsfeld has specially emphasized speed, noting that, “In order to defend the American cities, allies, and deployed forces the United States is required to have rapidly deployable, fully-integrated, **forces capable of reaching distant theaters quickly and working with air and sea forces to strike adversaries swiftly and with devastating effect.”** 7 Accordingly, the Pentagon’s Office of Force Transformation laid out their requirements in the Global Defense Posture Review (GPR), noting that only forces oriented around “speed” are able to define or alter the initial conditions on terms favorable to the U.S. interests, effectively dissuading and defeating asymmetric threats of non-state adversaries. 8 Their report again proudly states, “The U.S. military is developing an enhanced forward deterrent posture through the integration of new combinations of immediately employable, forward stationed and deployed forces; globally available reconnaissance, strike, and command and control (C2) assets; information operations capabilities; and rapidly deployable, highly lethal, and sustainable forces that may come from outside a theater of operations.” 9 According to the transformation research team, **ubiquitous, seamlessly joint, and virtually omniscient forces with capabilities for overcoming distance are expected to effectively break the will or otherwise shape the behavior of the elusive enemy**. 10 Allowing no safe, hardened sanctuary anywhere in the globe, **the potential adversary would no longer retain the will to fight**, or would be so disoriented that they can no longer fight or react coherently.

**Plan solves grid collapse---SMRs make mission critical 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 critical mission operations**

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

The cyber threat to the DIB is only part of a much larger challenge to DoD. Potential adversaries are seeking asymmetric means to cripple our force projection, warfighting, and sustainment capabilities, by targeting the critical civilian and defense supporting assets (within the United States and abroad) on which our forces depend. This challenge is not limited to man-made threats; DoD must also execute its mission-essential functions in the face of disruptions caused by naturally occurring hazards.20 Threats and hazards to DoD mission execution include incidents such as earthquakes, naturally occurring pandemics, solar weather events, and industrial accidents, as well as kinetic or virtual attacks by state or non-state actors. Threats can also emanate from insiders with ties to foreign counterintelligence organizations, homegrown terrorists, or individuals with a malicious agenda. From a DoD perspective, this global convergence of unprecedented threats and hazards, and vulnerabilities and consequences, is a particularly problematic reality of the post-Cold War world. Successfully deploying and sustaining our military forces are increasingly a function of interdependent supply chains and privately owned infrastructure within the United States and abroad, including transportation networks, cyber systems, commercial corridors, communications pathways, and energy grids. This infrastructure largely falls outside DoD direct control. Adversary actions to destroy, disrupt, or manipulate this highly vulnerable homeland- and foreign-based infrastructure may be relatively easy to achieve and extremely tough to counter. Attacking such “soft,” diffuse infrastructure systems could significantly affect our military forces globally – potentially blinding them, neutering their command and control, degrading their mobility, and isolating them from their principal sources of logistics support. The Defense Critical Infrastructure Program (DCIP) under Mission Assurance seeks to improve execution of DoD assigned missions to make them more resilient. This is accomplished through the assessment of the supporting commercial infrastructure relied upon by key nodes during execution. By building resilience into the system and ensuring this support is well maintained, DoD aims to ensure it can "take a punch as well as deliver one."21 It also provides the department the means to prioritize investments across all DoD components and assigned missions to the most critical issues faced by the department through the use of risk decision packages (RDP).22 The commercial power supply on which DoD depends exemplifies both the novel challenges we face and the great progress we are making with other federal agencies and the private sector. Today’s commercial electric power grid has a great deal of resilience against the sort of disruptive events that have traditionally been factored into the grid’s design. Yet, the grid will increasingly confront threats beyond that traditional design basis. This complex risk environment includes: disruptive or deliberate attacks, either physical or cyber in nature; severe natural hazards such as geomagnetic storms and natural disasters with cascading regional and national impacts (as in NLE 11); long supply chain lead times for key replacement electric power equipment; transition to automated control systems and other smart grid technologies without robust security; and more frequent interruptions in fuel supplies to electricity-generating plants. These risks are magnified by globalization, urbanization, and the highly interconnected nature of people, economies, information, and infrastructure systems. The department is highly dependent on commercial power grids and energy sources. As the largest consumer of energy in the United States, DoD is dependent on commercial electricity sources outside its ownership and control for secure, uninterrupted power to support critical missions. In fact, approximately 99 percent of the electricity consumed by DoD facilities originates offsite, while approximately 85 percent of critical electricity infrastructure itself is commercially owned. This situation only underscores the importance of our partnership with DHS and its work to protect the nation’s critical infrastructure – a mission that serves not only the national defense but also the larger national purpose of sustaining our economic health and competitiveness. DoD has traditionally assumed that the commercial grid will be subject only to infrequent, weather-related, and short-term disruptions, and that available backup power is sufficient to meet critical mission needs. As noted in the February 2008 Report of the Defense Science Board Task Force on DoD Energy Strategy, “In most cases, neither the grid nor on-base backup power provides sufficient reliability to ensure continuity of critical national priority functions and oversight of strategic missions in the face of a long term (several months) outage.”23 Similarly, a 2009 GAO Report on Actions Needed to Improve the Identification and Management of Electrical Power Risks and Vulnerabilities to DoD Critical Assets stated that DoD mission-critical assets rely primarily on commercial electric power and are vulnerable to disruptions in electric power supplies.24 Moreover, these vulnerabilities may cascade into other critical infrastructure that uses the grid – communications, water, transportation, and pipelines – that, in turn, is needed for the normal operation of the grid, as well as its quick recovery in emergency situations. To remedy this situation, the Defense Science Board (DSB) Task Force recommended that DoD take a broad-based approach, including a focused analysis of critical functions and supporting assets, a more realistic assessment of electricity outage cause and duration, and an integrated approach to risk management that includes greater efficiency, renewable resources, distributed generation, and increased reliability. DoD Mission Assurance is designed to carry forward the DSB recommendations. Yet, for a variety of reasons – technical, financial, regulatory, and legal – DoD has limited ability to manage electrical power demand and supply on its installations. As noted above, DHS is the lead agency for critical infrastructure protection by law and pursuant to Homeland Security Presidential Directive 7. The Department of Energy (DOE) is the lead agency on energy matters. And within DoD, energy and energy security roles and responsibilities are distributed and shared, with different entities managing security against physical, nuclear, and cyber threats; cost and regulatory compliance; and the response to natural disasters. And of course, production and delivery of electric power to most DoD installations are controlled by commercial entities that are regulated by state and local utility commissions. The resulting paradox: DoD is dependent on a commercial power system over which it does not – and never will – exercise control.

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

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

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

**Hegemony 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.

**SMRs create reliable power--- ensures effective missions**

**King et al 11** Marcus, Associate Director of Research at The George Washington University's Elliott School of International Affairs, with a concurrent appointment as Associate Research Professor of International Affairs, LaVar Huntzinger and Thoi Nguyen, "Feasibility of Nuclear Power on U.S. Military Installations", March, www.cna.org/sites/default/files/research/Nuclear Power on Military Installations D0023932 A5.pdf

**Having a reliable source of electricity is critically important for many DoD installations**. Fort Meade, Maryland, which hosts the National Security Agency’s power intensive computers, is an example of where electricity is mission critical. Installations need to be more robust against interruptions caused by natural forces or intentional attack. Most installations currently rely on the commercial electricity grid and backup generators.¶ **Reliance on generators presents** some **limitations**. A building dedicated generator only provides electricity to a specific building when there is a power outage. Typically, diesel standby generators have an availability of 85 percent when operated for more than 24 hours [38]. Most DoD installations keep less than a 5-day supply of fuel.¶ **Small nuclear power plants could contribute to electrical energy surety and survivability**. Having nuclear power plants networked with the grid and other backup generating systems5 could give DoD installations higher power availability during extemded utility power outages and more days of utility-independent operation. Existing large commercial nuclear power plants have an availability of over 90 percent.¶ **When a small nuclear power plant is networked** with existing backup generating systems and the grid, overall **availability values could be as high as 99.6 percent** [39]. Since proposed small reactors have long refueling intervals (from 4 to 30 years), if power from the commercial grid became unavailable, **a small reactor could provide years of electrical power independent of the commercial grid** [4].¶ Power assurance to DoD installations also involves three infrastructure aspects of electricity delivery: electrical power transmission, electricity distribution, and electricity control (of distribution and transmission). Electric power transmission is the bulk transfer of electrical energy from generating plants to substations located near population centers. Electricity distribution networks carry electricity from the substations to consumers. Electricity control is the management of switches and connections to control the flow of electricity through transmission and distribution networks.¶ Typically, transmission lines transfer electricity at high voltages over long distances to minimize loss; electricity distribution systems carry medium voltages. For electrical power transmission, very little additional infrastructure is required to incorporate small nuclear power plants because they would be located on or near the DoD installation being serviced. However, redundancy in transmission lines would make the overall network more robust.¶ Electricity control capabilities, such as self-healing6 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.**

### 1AC – Plan

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

### 1AC – Solvency

#### CONTENTION 2: SOLVENCY

#### Plan’s key to ensure availability of SMRs for the military and 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 has unique capabilities to advance SMRs---innovative financing

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 are awesome---feasible, cheaper, safer and solve other 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.

#### SMR incentives now but they’re insufficient

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

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

# 2AC

## Heg

### 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…”

#### Grid’s not improving---recent outages and lack of maintenance and funding

Cunningham 12 Nicholas, Policy Analyst at American Security Project, "Fragile Electricity Grid a National Security Concern", July 13, americansecurityproject.org/blog/2012/fragile-electricity-grid-a-national-security-concern/

The high winds from the recent “Derecho” storm knocked down trees, utility poles and power lines, leaving an estimated 3 million people without power in the Washington DC metro area. The emergency response, to say the least, was inadequate. Millions of people were left without power for several days, during a sweltering heat wave. Schools and businesses closed. Several people lost their lives in the last week and a half, both from the storm itself, and from heat-related illness. Maryland, Virginia, Ohio, West Virginia, and Washington DC announced a state of emergency.¶ The recent disaster highlights the fragility of our nation’s electricity grid. How could it take nearly a week to restore power to tens of thousands of people and businesses? The reason is that our electric grid is aging, under stress, and suffers from chronic underinvestment.¶ Underinvestment leads to aging infrastructure, which is already suffering from bottlenecks and congestion. The American Society of Civil Engineers (ASCE ) estimates that 70% of the nation’s transmission lines and transformers are more than 25 years old, leaving the grid vulnerable to outages. When power is cut off, businesses can’t open, factories shut down, and the economy takes a hit. Unplanned interruptions will cost the U.S. economy $6 billion in 2012, which is expected to rise to $71 billion by 2020 if investments aren’t made. ASCE estimates that the electric power industry would need to increase investment by $11 billion annually until 2020 to make the grid reliable.¶ The fragility of the grid presents a national security threat to the United States. The recent storm saw threats as ordinary as high winds and trees cripple the nation’s capital. With decades old infrastructure, we are not adequately equipped to handle extreme weather events, let alone greater threats such as coordinated cyber attacks on the electricity grid.¶ Not only have utilities devoted precious little to maintenance, but investment in innovation has been woefully lacking. Investment in R&D for the electric power sector has steadily declined over the past few decades. According to IEEE Spectrum, from 2001 to 2006 utilities dedicated a measly 0.17% of their revenue to R&D, a smaller share than the hotel industry.

## Solvency

### SMRs Feasible/Cheap/Safe

#### SMRs are awesome---feasible, cheaper, safer and solve other 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/

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### AT: Not Feasible for DOD/Military

#### SMRs are feasible options for military electricity generation

King et al 11 Marcus, Associate Director of Research at The George Washington University's Elliott School of International Affairs, with a concurrent appointment as Associate Research Professor of International Affairs, LaVar Huntzinger and Thoi Nguyen, "Feasibility of Nuclear Power on U.S. Military Installations", March, www.cna.org/sites/default/files/research/Nuclear Power on Military Installations D0023932 A5.pdf

With FOAK expenses excluded, the cost of electricity from a small nuclear power plant would be about $0.08 per kWh, which is slightly higher than the projected average retail price of electricity for industrial users throughout the country. This price is substantially lower than electricity prices in some remote regions where military bases are located.¶ Small nuclear power plants are a feasible option for providing electricity to military installations.

## T

### 2AC T – Financial Incentive

#### C/I – increase means to make greater – doesn’t require pre-existence

Reinhardt 5 (U.S. Judge for the UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT (Stephen, JASON RAY REYNOLDS; MATTHEW RAUSCH, Plaintiffs-Appellants, v. HARTFORD FINANCIAL SERVICES GROUP, INC.; HARTFORD FIRE INSURANCE COMPANY, Defendants-Appellees., lexis)

Specifically, we must decide whether charging a higher price for initial insurance than the insured would otherwise have been charged because of information in a consumer credit report constitutes an "increase in any charge" within the meaning of FCRA. First, we examine the definitions of "increase" and "charge." Hartford Fire contends that, limited to their ordinary definitions, these words apply only when a consumer has previously been charged for insurance and that charge has thereafter been increased by the insurer. The phrase, "has previously been charged," as used by Hartford, refers not only to a rate that the consumer has previously paid for insurance but also to a rate that the consumer has previously been quoted, even if that rate was increased [\*\*23] before the consumer made any payment. Reynolds disagrees, asserting that, under [\*1091] the ordinary definition of the term, an increase in a charge also occurs whenever an insurer charges a higher rate than it would otherwise have charged because of any factor--such as adverse credit information, age, or driving record 8 --regardless of whether the customer was previously charged some other rate. According to Reynolds, he was charged an increased rate because of his credit rating when he was compelled to pay a rate higher than the premium rate because he failed to obtain a high insurance score. Thus, he argues, the definitions of "increase" and "charge" encompass the insurance companies' practice. Reynolds is correct. “Increase" means to make something greater. See, e.g., OXFORD ENGLISH DICTIONARY (2d ed. 1989) ("The action, process, or fact of becoming or making greater; augmentation, growth, enlargement, extension."); WEBSTER'S NEW WORLD DICTIONARY OF AMERICAN ENGLISH (3d college ed. 1988) (defining "increase" as "growth, enlargement, etc[.]"). "Charge" means the price demanded for goods or services. See, e.g., OXFORD ENGLISH DICTIONARY (2d ed. 1989) ("The price required or demanded for service rendered, or (less usually) for goods supplied."); WEBSTER'S NEW WORLD DICTIONARY OF AMERICAN ENGLISH (3d college ed. 1988) ("The cost or price of an article, service, etc."). Nothing in the definition of these words implies that the term "increase in any charge for" should be limited to cases in which a company raises the rate that an individual has previously been charged.

#### C/I – Financial incentives induce behaviors---that includes plan

Webb 93 – lecturer in the Faculty of Law at the University of Ottawa (Kernaghan, “Thumbs, Fingers, and Pushing on String: Legal Accountability in the Use of Federal Financial Incentives”, 31 Alta. L. Rev. 501 (1993) Hein Online)

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

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

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

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

## K

### 2AC Nuke Memory K

#### The lens for your ballot should be pragmatic efforts at preventing future repetitions of violence like Hiroshima---this doesn’t “instrumentalize” memory---it localizes nuclear issues which solves their globe DA and animates our actions with the spirit of memory

Perlman 88---Michael Perlman, counselor at Maclean Hospital, 1988, Imaginal Memory and the Place of Hiroshima, p. 6-7

This book's exploration of "places" of memory and imagination is in accordance with this countervailing trend. The remembering of destruction in the service of preventing future holocaust is envisioned here as a way of serving the powers of memory and imagination themselves. We remember destruction in order that we may go on remembering. This is not a new assertion. It is found in the Odyssey when Alkinoos, one of Odysseus's hosts, responds to the former's grieving during a remembering in song of the Trojan War. The Gods, says Alkinoos, ordained this war and its destruction (olethros) for men in order that it might become a song for those to come (Od. VIII. 577-80). Images of war. destruction, pain and grief serve to remind us of memory's intrinsic value as they deepen our awareness of the hell of what has been. In these images we can hear a song.

Imaginal memory as explored and elaborated in this book becomes a primary value of the psyche in its own right: we work in order that memory may be kept alive. Part II, which assays what might be called the "history of imaginal memory." is intended to invite the reader to explore a vividness of memory and imagination that in our time has been largely forgotten, left without a place in our awareness. In Part III, this invitation is further extended, addressing a more practical and specific form of imaginal memory engaging images associated with the place of Hiroshima. The art of memory, from its earliest days, combines an intense involvement with psychic images with a strong practical orientation. We know that to remember often requires much practice, time, repetition. This holds true for any deep-going exploration of imaginal realms and powers. If this book inspires the reader to practice imaginal memory (in what-ever manner seems most appropriate to the individual), or even to seriously entertain the possibilities of such a practice, it will have served one of its main purposes.

The nuclear threat is approached here in indirect as well as direct ways. By valuing imaginal memory in its own right, prior to exploring its potential to address this threat, we become more immediately aware of precisely this potential. The development of a deepened psychological sensitivity to the power of remembered images points toward a deepening sensitivity to the nuclear threat and other global dilemmas that often appear remote, abstract and removed from daily concerns.

Some further initial reflections on traditional ways of imagining memory against the backdrop of nuclear threat will suggest the broader relevance of imaginal memory for present history. More possibilities of memory are revealed through a consideration of the relation of memory and prudence, forgetfulness, and the imagination of the archaic.

Da Signa's insistence upon remembering Paradise and Hell, reflecting the virtue of prudence, evokes a tradition which goes back at least to Plato's time. In the Republic (621 A) Socrates declares that souls about to be reincarnated must drink a measure of the water of the River Un-Care (Ameles) at the edge of the Plain of Forgetfulness. {Lethe: those not saved by phronesis—"wisdom" or "prudence"—drink more than their measure.) In the context of Plato's valuation of memory and recollection the implicit connection between memory and prudent wisdom becomes apparent: prudent souls, having drunk less of the draught of heedless forgetfulness, will best be able to remember the real world of Being.

The connection between memory and prudence is made more explicit by Cicero, who observes that knowledge of the past and prudent concern for the present and future are closely linked. Da Signa's prudential exhortation expresses the religious concerns of the Scholastics, who stressed the moral and ethical aspects of memory (its connection with Prudence, now a cardinal virtue, having been given by the authority of Cicero).

#### The memory of Hiroshima requires that we not confine our understanding solely to the past---an authentic understanding requires the call to avert nuclear war in the future

Perlman 88---Michael Perlman, counselor at Maclean Hospital, 1988, Imaginal Memory and the Place of Hiroshima, p. 85-86

Hiroshima is also a first place of the nuclear end-of-the-world time, a time that is both past and future. In its concrete horrors there is a vision of this end, an echo of remembering of mythic visions of past and future ends-of-the-world.15 "What was before" at Hiroshima may point to "what will be" for us all: an end both feared and fascinating, a future made present in images of the past of Hiroshima. This is why, in Jonathan Schell's words.¶ The Hiroshima people's experience ... is of much more than historical interest. It is a picture of what our whole world is always poised to become—a backdrop of scarcely imaginable horror lying just behind the surface of our normal life, and capable of breaking through into that normal life at any second. Whether we choose to think about it or not, it is an omnipresent, inescapable truth about our lives today that at every single moment each one of us may suddenly become the deranged mother looking for her burned child; the professor with the ball of rice in his hand whose wife has just told him "Run away, dear!" and died in the fires; Mr. Fukai running back into the firestorm; the naked man standing on the blasted plain that was his city, holding his eyeball in his hand; or. more likely, one of the million corpses.16¶ Again, Hiroshima becomes a paradigmatic time, a time which must forever be remembered—remembered as "omnipresent."¶ There is another way in which the time of Hiroshima reveals "what will be." Images arising from this place of time speak to us of the inevitability of death and of pathologized, disturbing psychic images. The nuclear threat compels us to imagine that the time of Hiroshima prefigures the literal time of the world's end. But from the perspective of imaginal memory, we can envision these images as prefigurings of a quite different sort of future. We may remember and imagine instead a future in which pathologized images from Hiroshima and other instances of historical catastrophe and violence are actively imagined, given their place in memory not acted out in literal annihilation.¶ In the work of imaginal memory, actual past and anticipated future are both made present so that we may apprehend the presence of soul in places and images figuring our nuclear history. The latter part of Schell's above-quoted passage reminds us of the distinct imagines agenies of memory. These remember for us as well as the psychic present, together with the presence in soul of future possibility. An archetypal sense of memory, as suggested in previous discussions (chapter I and 3), frees one from a too literal notion of time and the past, so that we can see the past's present and future. A narrowly literal concept of remembering invites, as Hillman observes, a displacement of the psychic present onto the historical past. Thus, he points out that 'The Holocaust wasn't in the 1940s only. It's going on now. ... We are living in a psychic concentration camp, in the sense that we are passively accepting the soulless world."17 So too with remembering Hiroshima and Nagasaki. The "living hell" of which hibakusha speak is living in the soul of our culture, in images that speak too of the world's present pain, dying, disfigurement. Hiroshima reveals *what is*.

#### Fear of extinction is a legitimate and productive response to the modern condition---working through it by validating our representations is the only way to create an authentic relationship to the world and death

Macy 2K – Joanna Macy, adjunct professor at the California Institute of Integral Studies, 2000, Environmental Discourse and Practice: A Reader, p. 243

The move to a wider ecological sense of self is in large part a function of the dangers that are threatening to overwhelm us. We are confronted by social breakdown, wars, nuclear proliferation, and the progressive destruction of our biosphere. Polls show that people today are aware that the world, as they know it, may come to an end. This loss of certainty that there will be a future is the pivotal psychological reality of our time.

Over the past twelve years my colleagues and I have worked with tens of thousands of people in North America, Europe, Asia, and Australia, helping them confront and explore what they know and feel about what is happening to their world. The purpose of this work, which was first known as “Despair and Empowerment Work,” is to overcome the numbing and powerlessness that result from suppression of painful responses to massively painful realities. As their grief and fear for the world is allowed to be expressed without apology or argument and validated as a wholesome, life-preserving response, people break through their avoidance mechanisms, break through their sense of futility and isolation. Generally what they break through into is a larger sense of identity. It is as if the pressure of their acknowledged awareness of the suffering of our world stretches or collapses the culturally defined boundaries of the self.

It becomes clear, for example, that the grief and fear experienced for our world and our common future are categorically different from similar sentiments relating to one’s personal welfare

. This pain cannot be equated with dread of one’s own individual demise. Its source lies less in concerns for personal survival than in apprehensions of collective suffering – of what looms for human life and other species and unborn generations to come. Its nature is akin to the original meaning of compassion – “suffering with.” It is the distress we feel on behalf of the larger whole of which we are a part. And, when it is so defined, it serves as a trigger or getaway to a more encompassing sense of identity, inseparable from the web of life in which we are as intricately connected as cells in a larger body.

This shift in consciousness is an appropriate, adaptive response. For the crisis that threatens our planet, be it seen in its military, ecological, or social aspects, derives from a dysfunctional and pathogenic notion of the self. It is a mistake about our place in the order of things. It is the delusion that the self is so separate and fragile that we must delineate and defend its boundaries, that it is so small and needy that we must endlessly acquire and endlessly consume, that it is so aloof that we can – as individuals, corporations, nation-states, or as a species – be immune to what we do to other beings.

### Owen

#### 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.

### AT: Ontology

#### Util outweighs ontology

Macauley 96—Associate prof of philosophy and environmental studies, Penn State (David, Minding Nature, p 74)

We may approach the issue of what Heidegger may teach today's radical environmentalists by examining an issue about which they and Heidegger would profoundly disagree. Heidegger claimed that there is a greater danger than the destruction of all life on earth by nuclear war.40 For radical environmentalists, it is hard to imagine anything more dangerous than the total destruction of the biosphere! Heidegger argued, however, that worse than such annihilation would be the totally technologized world in which material "happiness" for everyone is achieved, but in which humanity would be left with a radically constricted capacity for encountering the being of entities. This apparently exorbitant claim may be partially mitigated by the following con- sideration. If human existence lost all relationship to transcendent being, entities could no longer show themselves at all, and in this sense would no longer "be." Who needs nuclear war, Heidegger asked rhetorically, if entities have already ceased to be? For many environmentalists, such a question reveals the extent to which Heidegger remained part of the human-centered tradition that he wanted to overcome. By estimating so highly human Dasein's contribution to the manifesting of things, Heidegger may well have underesti- mated the contribution made by many other forms of life, for which the extinction of humankind's ontological awareness would be far preferable to their own extinction in nuclear war!

## CP

### 2AC Reg-Neg CP

#### Massive delays --- their evidence’s based on outdated wishful thinking

Daniel Selmi 5, Prof Law at Loyola, 35 Envtl. L. 415, lexis

1. Time as a False Indicator

 An ongoing point of contention in the literature is whether regulatory negotiation saves time in comparison to traditional rulemaking. Such savings were originally cited as a principal justification for undertaking the negotiation process. 253 **Recently, however**, critics have contended that time savings do not occur. 254 Moreover, observations made by participants in negotiated rulemakings **confirm that negotiations require a greater time commitment** than anticipated at their outset. 255

The metal-finishing rulemaking **unquestionably fit the time-consuming pattern**. During negotiations, both industry and environmentalists requested a sufficiently slow pace to allow for the compilation of additional technical information. 256 If a negotiation includes a process to facilitate data exchanges and resolve outstanding technical issues, as this negotiation did, parties must expect that negotiations will lengthen substantially.

#### Every citizen’s a stakeholder --- notification consumes resources

Alejandro Camacho 5, Associate Prof of Law at Notre Dame, 24 Stan. Envtl. L.J. 269, lexis

Though achieving collaboration and consensus is certainly possible in administrative regulatory contexts, the prospect of achieving a multilateral, participatory agreement on a proposed national rule **can be daunting**. 220 Because of their scope, federal administrative rules tend to be made over long periods of time, involve many negotiating sessions, 221 and impact hundreds if not **thousands of parties from different regions** of the country. Simply notifying all of these parties that a given issue is being considered for a potential rulemaking is in **itself a logistical challenge**. Even if all relevant parties become involved, the interests affected by the rule may **be too numerous** or varied for the multilateral process to be manageable or for participation to be meaningful. Furthermore, participating in a long-term, nationwide forum can be **time consuming and expensive**, especially for smaller, poorer, or less organized parties. 222 Indeed, some of the parties with the biggest stakes in the outcome of national administrative law are large but diffuse groups (**such as consumers in a product safety rulemaking**) that frequently are poorly represented in the negotiation process. Even some proponents of federal regulatory negotiation concede that it may be under-inclusive because the most active stakeholder groups tend not to be representative of the general consumer or median voter. 223 Finally, the wide spectrum of interests and concerns at stake **increases the risk of gridlock**, [\*324] making agreement formation and implementation that **much more difficult.**

#### Coal would say no

Rizer 11 [Arthur Rizer, Adjunct Professor of Law at Georgetown University’s Law Center and prosecutor with the United States Department of Justice, Criminal Division, “The National Security Threat of Energy Dependence: A Call for a Nuclear Renaissance,” http://harvardnsj.org/wp-content/uploads/2011/02/Vol.-2\_Rizer\_Final-Version.pdf]

Lastly, with today’s economic downturn, nuclear energy could create high paying and high tech jobs that cannot be outsourced, a goal stated several times by President Barack Obama in his 2008 campaign. 101¶ [To footnotes]¶ 101¶ Energy & Environment, THE WHITE HOUSE, http://www.whitehouse.gov/agenda/energy\_and\_environment/ (last visited Apr. 20, 2009). It should be noted that with the expansion of green jobs other jobs in the energy industry, specifically the coal industry, could be threatened. See Nancy Lofholm, Coal Miners Rally in Grand Junction Against Clean-Energy Plans, DENV. POST, Aug. 31, 2010,

#### Uncertainty wrecks investment

Freed 12—Vice President for Clean Energy, Third Way (Josh, Certainty for Clean Energy Needed, http://energy.nationaljournal.com/2012/01/whats-in-store-for-2012.php)

At a moment when China is increasingly dominating the clean energy sector, the U.S. is being left behind. Businesses refuse to make long term investments because of the regulatory uncertainty they face. If Congress could provide certainty to the energy sector, businesses could and would invest more, hire more workers, and help the U.S. economy rally.

## DA

### Link Non-U

#### SMR incentives now but they’re insufficient

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

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

### 2AC Oil DA

#### Price collapse inevitable – diversification is only way to survive – their ev concedes

Paikin 12 Zach Paikin is a columnist for Canada's iPolitics and contributes research on international affairs to several Washington-based think tanks and institutes, April 11, 2012, “Coping in an increasingly competitive global economy”, http://www.ipolitics.ca/2012/04/11/zach-paikin-coping-with-less-revenues-in-an-increasingly-competitive-global-economy/

It gets worse. **The price of oil is about to collapse due to the increasing extraction of unconventional oil**. Roughly 250 billion barrels of oil shale — and possibly as much as twice that figure — have been discovered in Israel and will begin to flow into the global market in about a decade **at an estimated $30-40 per barrel**, merely one third of the current price of oil. This gives Israel the third largest oil shale reserves in the world after the United States and China. The U.S. has already become a net exporter of gasoline and could surpass both Russia and Saudi Arabia as the world’s largest supplier of oil in the near future thanks to its unconventional oil reserves.¶ **The upcoming decline in the price of oil will result in the near-total collapse of non-diversified economies**, such as the Middle East’s oil-exporting countries. For instance, roughly 75 per cent of Saudi Arabia’s governmental revenue and 90 per cent of its export earnings come from the oil industry. Natural gas doesn’t provide these Mid-East states with much solace: Canadian exports of natural gas to the United States last year alone accounted for half the rate of all natural gas exports from the Middle East and North Africa.

#### Nuclear doesn’t tradeoff with oil---electricity not liquid fuel

Styles 12 Geoffrey, Managing Director of GSW Strategy Group, LLC, an energy and environmental strategy consulting firm, "How Helpless Are We in the Face of Rising Oil Prices?", February 24, energyoutlook.blogspot.com/2012/02/how-helpless-are-we-in-face-of-rising.html

To see why requires a sense of how the oil market works, as well as the uses to which we put oil today, rather than a generation ago. For starters, although the President has worked hard to improve conditions for renewable energy sources like wind and solar power--sources that certainly have an important role to play in our long-term energy mix--these technologies, along with nuclear power, are out of place in a conversation about oil prices in 2012. That's because they produce electricity rather than liquid fuels, and less than 1% of US electricity is generated from oil today, compared to more than 10% in 1980. Electricity from renewable and nuclear power doesn't compete with imported oil or any other kind of oil; it competes with domestic energy sources like coal and natural gas, most of which now comes from conventional and unconventional gas fields, rather than as a byproduct of producing oil. So by all means lets have a conversation about renewables in the context of reducing greenhouse gas emissions today and displacing oil from transportation when there are tens of millions of electric vehicles on the road in the future, but in terms of oil prices now and in the near future, they are a rhetorical diversion.

#### Military oil doesn’t link

Kreutzer 12 David, Research Fellow in Energy Economics and Climate Change, Heritage Foundation, “Military Biofoolishness”, May 21, <http://energy.nationaljournal.com/2012/05/powering-our-military-whats-th.php>

The entire U.S. military currently consumes about 360,000 barrels per day of petroleum-based fuel, with 175,000 barrels per day (or less) going to the Air Force’s jets. A single platform in the Gulf of Mexico (Thunderhorse) produces as much petroleum as these jets consume and at a much lower cost than the biofuel replacements. The Keystone XL Pipeline would bring enough petroleum from a very secure Canada to meet our total military consumption two or three times over. The same story holds for other potential sources of conventional petroleum, such as the Arctic National Wildlife Refuge. The Air Force’s target is to replace about 26,000 barrels per day with biofuels. Whatever energy security that may provide could be doubled by a single well in the Gulf of Mexico. As a strategic policy, switching the military to biofuels can only make our enemies think we are not serious. If the entire military consumption were switched away from petroleum, that would cut worldwide demand by 0.4 percent. This cut would reduce revenues to oil producers by about 1.5 percent. Let’s hope biofuels are not anti-terrorism Plan A. Though some energy technologies that are too expensive for general civilian use may make sense for the military, biofuels are not among them. The military needs to rethink its biofuels program.

### 2AC Obama Good – Elections

#### Romney win

Horowitz 10/26—writes for the Madison Project (Daniel, A Wide Electoral/Popular Vote Split Won’t Happen, [www.redstate.com/2012/10/26/a-wide-electoralpopular-vote-split-wont-happen/](http://www.redstate.com/2012/10/26/a-wide-electoralpopular-vote-split-wont-happen/))

There is an emerging narrative percolating throughout the political world; the prospect that Romney could win the popular vote but lose the Electoral College. The theory is predicated on the seemingly contradictory data between state and national polls. National polls seem to show Romney with a consistent 2-4% lead, while state polls show the candidates tied or Obama slightly ahead in Ohio, Iowa, and Wisconsin.¶ Some analysts are attempting to harmonize the state and national polls by theorizing that Romney’s national lead is driven by historic gains among whites in red states and a strong showing in Pennsylvania and Michigan. They suggest that ultimately the Electoral College boils down to Ohio (or Wisconsin, if Romney loses Ohio), a state where Obama’s much-vaunted ground game and oversaturation of ads could flip the state and the entire election to Obama.¶ This analysis is dead wrong. Either the state polls are correct, and this is a dog fight, or the national polls are correct, and this is a Romney win. The both cannot reflect reality.¶ It’s not just that the national polls show Romney ahead by 3%; it’s that 3 respected, yet diverse, national polls converged yesterday on the exact same number in one day – Romney 50% Obama 47% (today Gallup is Romney +5 and ABC/WaPost is Romney +1). So Romney is at 50% and the incumbent is at 47% (how ironic!) with undecided voters likely to break against him in an election defined by the stagnating economy. But it’s more than that. The Washington Post poll has Romney leading by 19-20 among Independents; Rasmussen shows him with a 17-point lead. Romney is now crushing Obama on the economy and even leading in favorability. It is almost impossible to lose the Electoral College under normal circumstances when leading by more than 1% nationally. It’s certainly impossible to lose when polling this well in all the internals.¶ In order for Romney to win by such margins in the popular vote, yet lose the Electoral College, he would have to outperform Bush in a number of non-swing-states, though he is unlikely to do so.¶ The math doesn’t add up.¶ Bush won the popular vote by 2.46% in 2004. In order to assume that Romney wins by roughly the same margin as Bush (or probably more, based on the internal numbers of the national polls), yet loses the Electoral College, one has to find a number of places where Romney outperforms Bush. But look around the map. Bush did really well in red states and probably won a number of them by more than Romney will. Bush won Montana by 21 points – something Romney will not do. The latest Rasmussen poll had him up just 8.¶ What about the blue states? People forget that Bush did pretty well in many Democrat states. He came within 7.6 in Delaware; 6.7 in NJ, 4 in Oregon, 3.5 in MN, and 9 in Maine. Heck, he only lost California by 10 points – a somewhat unlikely outcome for Romney.¶ What about the swing states? He won CO by 4.5; VA by 8; FL by 5; and NC by a whopping 13. He even won New Mexico – a state that Romney will not come close to winning (unless the Gallup national poll is correct).¶ What about Romney dramatically overperforming in Wis, MI, and PA, yet still losing? Well, that’s already baked into Bush’s 2.46% national margin. He lost Wis. by the slimmest of margins, PA by 2.5, and MI by 3.5.¶ Across the board, this is a much better showing in many states than Romney is expected to win, even in the best case scenario. Yet, he still only won the popular vote by 2.46% overall. So the idea that Romney could match this margin or even more nationally, yet lose the Electoral College, but make up the difference by overperfroming Bush in a number of areas, is crazy talk. Where would those votes come from?¶ Bottom line: if Romney wins the popular vote by 2-3%, he will clearly run the table on all the swing states, and possibly come very close in MI or PA, if not win them outright. Oh, and what’s all that talk of ads running in Minnesota?¶ So what about the state polls? If you look at most of the samples, they are more Democratic than the 2008 turnout model. It’s becoming clear that the early voting, which is disproportionately comprised of Democrats, is distorting the likely voter screens of most state polls. That’s why they are all showing a high D turnout, despite the ubiquitous enthusiasm gap.¶ Additionally, notice how Romney’s surge has stalled out in the state polls even as it continues in the national polls. He has even stalled in some Colorado and Virginia polls, states where Obama is clearly losing. The stagnation in all the state polls began right around the time when early voting picked up in earnest. If we are to believe the national polls, which are hard to disregard due to the convergence, the only plausible theory about the divergence of state polling is that they are inflating Democrat strength by 2-4% due to early voting.¶ If you reconstruct a turnout model that is only slightly more favorable for Republicans than 2008, Romney is ahead in most of the important states. Take this Gravis Marketing poll of Iowa, for example. They show Obama up 4 points, but the party ID is D +6 (D 41, R 35, I 24). In 2008, it was D +1 (D 34, R 33, I 33), and in 2004 it was R +2 (D 34, R 36, I 30). Here’s the kicker: the poll shows Romney leading by 12 among independents. Remember that of all swing states, Republicans improved their voter registration edge the most in Iowa. Additionally, there is a tremendous enthusiasm gap. Yet, if we merely reconstruct the 2008 turnout, which was evenly split among all three affiliations, a 12-point Indy win would clearly tip the state to Romney.¶ We’re seeing the same thing with the latest ARG poll in Ohio. They have Obama up 49-47, yet Romney is winning Independents by a gargantuan 21 points. The sample is D+9, even though it was D+5 in 2008.¶ It’s becoming clear that the national polls could easily work with the state polling data if we adjust for the likely turnout distortions from early voting. To a certain extent, we are seeing a reflection of the national polling in the Rasmussen state polls that factor in respondents who are certain to vote. However, whether this theory is correct or not, one thing is certain: Romney will not win Independents nationally by 15-19 points and lose the Electoral College.

#### 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.

#### SMRs popular—their generic links don’t apply

Covert 12 Adrian is the Editorial Assistant at Gizmodo Magazine, “The US Government Is Banking on Small Nuclear Reactors for Future Energy”, March 12, 2012, http://gizmodo.com/5890394/the-us-government-is-banking-on-small-nuclear-reactors-for-future-energy

Ever since Fukushima, nuclear power has not been a warmly-received concept when it comes to energy solutions. But still, small modular reactors have remained one iteration of nuclear power that people are optimistic about due to their relative safety and manageability. That's why the US Department of Energy has entered into partnerships with the top SMR makers to help nurture the tiny wonders.¶ According to Ars Technica, the governement is going to offer up land at the Savannah River Nuclear Lab to work on research and build test sites for development. In addition to their size and relative stability, SMRs are popular because reactors are never opened on site, and are sent back to a central facility for refueling, which eases concerns about security. Sure they may not generate Gigawatts, but Megawatts aren't so bad either.

#### Energy policy won’t switch votes—it’s all about the economy

AP 12 (Associated Press, “Climate change not a presidential election issue yet”, 8/12, http://www.cbsnews.com/8301-250\_162-57489676/climate-change-not-a-presidential-election-issue-yet/)

Barack Obama promised to tackle climate change when he first ran for the White House four years ago, but - battling this summer for a second term - he speaks little of the issue even as the United States suffers through a drought of historic proportions, wild storms and punishing heat that topples temperature records almost daily. As late as April, Obama told Rolling Stone magazine climate change would be a central campaign issue. "I will be very clear in voicing my belief that we're going to have to take further steps to deal with climate change in a serious way," he said. But as the campaign against Republican challenger Mitt Romney reaches an early boil, even before the parties hold their nominating conventions, climate change is little spoken of by incumbent candidate Obama, who four years ago foresaw millions of new jobs through investments in "renewable sources of energy like solar power, wind power and advanced biofuels." Instead Obama is fighting a Romney challenge in a tight race over the struggling American economy and stubbornly high unemployment. Gallup polling repeatedly shows the economy as the chief concern among American voters at 65 percent, while environmental and pollution issues were mentioned by less than 1 percent of those polled. Even without a big push on climate change, Obama has the support of environmentalists. Sierra Club executive director Michael Brune said Obama "has done a substantial amount in his three years to fight the climate crisis." Romney, he said, "is taking his lead from fossil fuel companies and does not even acknowledge there is a climate problem." Romney has been accused of changing positions on the issue to curry favor with the most conservative Republicans, many of whom deny that climate change exists. As governor of the liberal-leaning state of Massachusetts, Romney imposed restrictions on carbon dioxide emissions on power plants in the state. But as a presidential candidate, he has said the "idea of spending trillions and trillions of dollars to try to reduce CO2 emissions is not the right course for us." He acknowledges that the globe is warming, but says "we don't know what's causing climate change on this planet." Early in his administration, Obama was more bullish on tackling climate change. He pushed through tough new fuel economy standards for cars and trucks and promoted alternative energy. But the first years of Obama's presidency were dominated by the political fight over his plan to overhaul the country's health care system. Obama managed to pass health care over intense Republican objections while Democrats controlled both houses of Congress. But after Republicans - fueled by the conservative tea party movement's anti-government, small-tax message - seized control of the House of Representatives in the 2010 elections, the president's legislative agenda has been blocked. The United States is now more politically riven and gripped in partisanship than at any time in recent history. Legislation on a deeply controversial issue like curbing greenhouse gases stands no chance of passage in Congress at a time when Republicans are accusing Obama of reckless spending and burdening businesses with unnecessary regulations. Obama was bitten badly when Solyndra, a solar energy firm that received a $500 million federal loan guarantee, went bankrupt and left taxpayers with the bill. Republicans painted Obama's drive for alternative energy as a waste of time and money in an economy that was struggling to pull out of the worst downturn since the Great Depression. Obama hasn't totally ignored climate change on the campaign trail. As recently as this week he was promoting a drive to expedite seven solar and wind energy projects in the American West. His interior secretary, Ken Salazar, said Tuesday that the administration had in the past three years "approved more utility-scale renewable energy projects on public lands than in the past two decades combined." But there is little chance that the few undecided American voters who will decide the razor-close election will cast their ballots based on the candidates' position on climate change. James Riddlesperger, a political scientist who studies the juncture of science and politics at Texas Christian University, said the political lines are already drawn. "Everybody already knows where the parties, the candidates stand on global warming," he said. "What is done about it awaits the outcome of this election."

#### Military spending swings key battlegrounds---ensures Obama win

Thompson 12 Political Columnist-Forbes, “The Florida Effect: How Military Votes Could Hand Romney the White House”, 8/21, http://www.forbes.com/sites/lorenthompson/2012/08/21/the-florida-effect-how-military-votes-could-hand-romney-the-white-house/print/

Much has been written about the wrangling and irregularities that surrounded Bush’s controversial victory — Gore actually won the popular vote nationwide — but one crucial factor in Bush’s Florida win has been largely overlooked. If Eglin Air Force Base in the state’s western Panhandle had been located in Alabama rather than Florida, Al Gore would have been sitting in the White House on 9-11. The counties around Eglin generated the most lopsided totals in the state favoring Bush, with the main county where the base is located giving Gore less than one in four votes. Not coincidentally, the only other county in the state where Bush did so well and Gore so badly was near the Navy’s big bases at Jacksonville. As the Wikipedia entry for that county observes, it is “a popular choice of residence for military personnel” stationed at those bases. So it was George Bush who was sitting in the White House on 9-11, because military votes had enabled him to overcome strong support for Gore in places like Miami-Dade County, winning a majority in both Florida and the Electoral College. Had Gore prevailed in Florida there probably wouldn’t have been an Iraq war three years later, and there might not have even been terrorist attacks on 9-11 since there would have been less disruption to the nation’s security team. Paradoxically, the preference of voters near big military bases in Florida for a “strong leader” like Bush may have led to a decade of war. But that’s just speculation; what is very real is the role that **voters motivated by military interests play in national elections** — a role that usually favors GOP presidential candidates. I’m not just talking about active-duty military personnel stationed at big bases in swing states like Colorado, Ohio and Virginia. I’m also referring to dependents whose lifestyles are determined by military pay and benefits, reservists residing in all 50 states, veterans who have retained their ties to the military, and civilians working at big bases whose jobs are endangered every time the Pentagon cuts spending. Add all these constituencies up, and they **amount to a pretty sizable voting bloc for any presidential candidate who is willing to** throw money at the military**.** Lately, those candidates have tended to be Republicans. Although Democrats presided over most of the big military buildups of the last century, their party’s thinking about defense was transformed by the Vietnam War. The left wing of the party became decidedly anti-military, just as the transition to an All Volunteer Force was making the military more conservative in its political leanings. This ideological divide, which has been documented by analysts such as Thomas Ricks, has made military voters more inclined to support Republicans than they were before Vietnam. It appears that the end of conscription and the growing professionalization in the ranks has produced a political culture tending to favor conservatives. Voters with ties to the military are not a large part of the electorate, so the impact of these trends on elections isn’t noticeable in most states. But in states like Florida that are fairly evenly balanced between supporters of the two national parties, the military vote can decide election outcomes. That’s especially true in presidential elections, because of the way in which the Electoral College awards votes on a winner-take-all basis from state to state. Since candidates can secure all of a state’s Electoral College votes with a modest plurality in the statewide balloting, military voters potentially exercise a disproportionate influence in states that are otherwise evenly balanced between the parties. Florida is the biggest prize in this sweepstakes given its rapid population growth. The 1990 census gave it 25 Electoral College votes because based on its population it had 23 members in the House of Representatives and the constitutionally mandated two U.S. Senators. The 2000 census gave it two more representatives and thus two more votes in the college. The 2010 census added two additional representatives, giving the Sunshine State a total of 29 Electoral College votes. So in this year’s balloting, Florida will be the only swing state that can deliver over a tenth of the 270 Electoral College votes candidates need to secure the presidency.

#### Sandy outweighs the link --- crushes turnout and media coverage --- even in states not impacted by the storm

Howard Kurtz 10-28, Daily Beast, “Hurricane Sandy Upends the Presidential Campaign”, http://www.thedailybeast.com/articles/2012/10/28/hurricane-sandy-upends-the-presidential-campaign.html

Mitt Romney and Barack Obama have spent months meticulously planning the endgame of reaching enough wavering voters to eke out an Electoral College victory.¶ And now it could all be blown away by a monster storm. If Hurricane Sandy does anywhere near as much damage as forecasters are predicting, it will upend both presidential campaigns and leave millions of voters focused more on personal misery than politics.¶ Oh, and have I mentioned that the media love extreme weather?¶ The so-called Frankenstorm is expected to make landfall somewhere between Maryland and Rhode Island on Monday, but it is so broad—with tropical storm winds covering 450 miles—that it could wreak devastation along the Eastern Seaboard and as far inland as Ohio.¶ This is already **causing havoc with campaign schedules**, forcing Romney and Vice President Biden to cancel weekend rallies in Virginia Beach. The president is heading to Florida on Sunday night, earlier than he had originally planned.¶ But more than the candidates’ ability to show up in the swing states is at stake. Millions of people may be **without power** in the final week of the campaign. That means they won’t see the barrage of television ads that the campaigns will be unleashing, despite the fact that Mitt Romney’s team has been hoarding cash for just this moment.¶ Every analyst says the tight election could **turn on get-out-the-vote efforts**. But fewer voters might turn out if they’re worried about rotting food in their refrigerators and sleeping in cold houses. The storm could particularly set back early-voting efforts in the affected states.¶ The situation is reminiscent of the problem Romney faced on the eve of the Republican convention. While Hurricane Isaac turned out to be a bust, just dumping some rain on Tampa, Romney made the right decision in canceling the convention’s first night because the television coverage was all about the storm.¶ And that, from the campaigns’ point of view, is the killer potential of Sandy. We could be looking at days of saturation coverage on cable news and morning shows, all but obliterating the closing messages that Obama and Romney want to deliver. Even if you live in swing-state Colorado, far from the storm’s path, **you’re going to see endless live shots** of windswept correspondents in parks getting soaked.

#### Gridlock inevitable with any election outcome

Curry 9/11/12 - NBC News national affairs writer (Tom, NBC Politics, “Romney election could create new scenario for EPA and coal,” <http://nbcpolitics.nbcnews.com/_news/2012/09/11/13807749-romney-election-could-create-new-scenario-for-epa-and-coal?lite>)

Whether Mitt Romney or Barack Obama wins the presidential election, a congressional impasse in 2013 seems likely. That’s because under most conceivable election scenarios – with Romney or Obama in the White House, and with either Democrats maintaining their Senate majority, or the Republicans taking it – the minority party could use the filibuster threat to block proposals it opposed.

### AT: HC Repeal

**No repeal—4 reasons**

**Volsky 12** (Deputy Editor of ThinkProgress.org. Igor is co-author of Howard Dean’s Prescription for Real Healthcare Reform and has appeared on MSNBC, CNN, Fox Business, Fox News, and CNBC television, and has been a guest on many radio shows. In 2011, Forbes named Igor one of their top 30 under 30 in Law & Policy, 6-28, “4 Reasons Why Republicans Won’t Be Able To Repeal Obamacare”, http://thinkprogress.org/health/2012/06/28/508503/4-reasons-why-republicans-wont-be-able-to-repeal-obamacare/)

Responding to Thursday’s Supreme Court decision upholding the constitutionality of the Affordable Care Act, Congressional Republicans have scheduled a vote in the House to repeal the law and Mitt Romney pledged to undo the measure if he’s elected president in November. But unless the GOP wins a super majority in the Senate — a scenario no one thinks is plausible — it can do little more than weaken Obamacare’s regulations and defund some of its provisions. Here is why: 1) Romney has no authority to issue waivers. Romney has promised to expand a provision of the Affordable Care Act that allows states to opt out of certain sections of the law to permit states to ignore it entirely. But the executive branch and the Department of Health and Human Services (HHS) likely don’t have the authority to grant such broad waivers. According to the law, HHS (together with the IRS) have waiver authority, but only if the states meet very specific requirements. Neither have blanket waiver authority, which would have to come from Congress. Sen. Ron Wyden (D-OR) — the author of the waiver provision — has challenged Romney’s claims, saying, “Anybody who tries to move outside the standards of the bill — which is the coverage and costs and the like — well I’ll certainly fight that. But I think lots of other people will too.” 2) Congress can’t repeal the full law through reconciliation. Without the necessary 60 votes in the Senate for full repeal, Republicans are pledging to use a budget reconciliation bill to undo the ACA. But this process would only apply to the budget-related elements of the law and would thus leave many portions — including the mandate — intact. As health care expert Robert Laszewski put it, “Romney could end up creating a chaotic environment driven by enormous uncertainty over just which parts of the new health care law would be implemented–for consumers, health care providers, and insurers.” 3) Republicans have nothing to replace it with. David Frum explains that since the expansion of coverage provisions go into effect in 2014, Romney would have just one year to both repeal and replace the law. Republicans haven’t even coalesced around a single plan

— and many in the party believe that the federal government should leave health care alone and want to leave the entire reform process to the states. Thus, “if replacement does not happen in the first 100 days, it won’t happen at all—that is, it won’t happen as a single measure, but rather will take the form of dozens of small incremental changes adopted episodically over the next 20 years.” 4) Americans support Obamacare’s provisions. While Americans may not like “Obamacare” — and the political process of passing it — they do support its major provisions and are likely to resist any effort by Republicans to take away their benefits. A recent Reuters/Ipsos poll found that while 56 percent of Americans oppose the law as a whole, 61 percent of respondents favored allowing young adults to stay on their parents’ insurance plans until age 26, 72 percent wish to maintain the requirement that companies with more than 50 workers provide health insurance for their employees, and 82 percent of respondents favored banning insurance companies from denying coverage to people with pre-existing conditions. As more benefits roll out in 2014, it will be increasingly difficult for Republicans to argue for their repeal.

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## Case

### AT: Personnel

#### No workforce shortage

ITA 11 International Trade Administration, “The Commercial Outlook for U.S. Small Modular Nuclear Reactors” Manufacturing and Services Competitiveness Report, February, US Department of Commerce

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

### Heg Solves War

#### Empirics and best studies prove

Wohlforth 8 William, Daniel Webster Professor of Government in the Dartmouth College Department of Government, October, World Politics, “Unipolarity, Status Competition, and Great Power War,” www.­polisci.­wisc.­edu/­Uploads/­Documents/­IRC/­Wohlforth (2009)­.­pdf)

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

## Oil DA

### AT: Failed States

#### No failed states impact

Justin Logan and Christopher Preble 6 | Justin Logan is a foreign policy analyst and Christopher Preble is director of foreign policy studies at the Cato Institute. The Cato Institute “Failed States and Flawed Logic The Case against a Standing Nation-Building Office” January 11, 2006

Failed States and Failed Reasoning¶ All of those arguments suffer not so much from inaccuracy as from analytical sloppiness. It would be absurd to claim that the ongoing state failure in, say, Haiti, poses a national security threat of the same order as would, for example, state failure in Indonesia, with its population of 240 million, or in nuclear-armed Pakistan. In fact, the overwhelming majority of failed states have posed no security threat to the United States. The blanket characterization that failed states represent anything monolithic is misleading. Rather, the dangers that can arise from failed states are not the product of state failure itself; threats are the result of other conditions, such as the presence of terrorist cells or other malign actors within a failed state. It is not the “failure” that threatens. American intelligence services, U.S. diplomats, and the entire national security bureaucracy are already properly tasked with determining which states, failed or otherwise, present threats to U.S. national security. While September 11 certainly underscored the potential dangers that nontraditional threats could pose, it did nothing to transform each poorly governed nation into a pressing national security concern.

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#### Low prices inev – Saudi and demand

LeVine 12 Steve LeVine, writer for Foreign Policy, June 20, 2012, “Why oil prices are keeping Putin up at night”, http://oilandglory.foreignpolicy.com/posts/2012/06/20/why\_oil\_prices\_are\_keeping\_putin\_up\_at\_night

Citigroup's Morse thinks that prices can fall further from where they are now, but not as low as Verleger forecasts because, he told me, today's market conditions are different from 2008 -- the decline in demand is not as steep, and inventories are not as large. Morse calculates that Brent can fall into the $70s-per-barrel range and U.S.-traded oil into the $60s-a-barrel range. "**There is a good chance Saudi Arabia continues to produce enough to force [a rise in oil inventories]**. And there's a good chance, between Europe and China, that demand growth could come to a halt," Morse said. OPEC might respond by reducing production, **but its actions would be late**. "Add to the scenario no more supply disruptions (or only modest ones) and no military conflict involving Iran," Morse said, "and **prices could fall another $20 a barrel fairly easily**.

## Elections

### AT: HC Impact

#### Finishing Volsky

— and many in the party believe that the federal government should leave health care alone and want to leave the entire reform process to the states. Thus, “if replacement does not happen in the first 100 days, it won’t happen at all—that is, it won’t happen as a single measure, but rather will take the form of dozens of small incremental changes adopted episodically over the next 20 years.” 4) Americans support Obamacare’s provisions. While Americans may not like “Obamacare” — and the political process of passing it — they do support its major provisions and are likely to resist any effort by Republicans to take away their benefits. A recent Reuters/Ipsos poll found that while 56 percent of Americans oppose the law as a whole, 61 percent of respondents favored allowing young adults to stay on their parents’ insurance plans until age 26, 72 percent wish to maintain the requirement that companies with more than 50 workers provide health insurance for their employees, and 82 percent of respondents favored banning insurance companies from denying coverage to people with pre-existing conditions. As more benefits roll out in 2014, it will be increasingly difficult for Republicans to argue for their repeal.

### AT: Bioterror/Disease

#### No bioterror impact

O’Neill 4O’Neill 8/19/2004 [Brendan, “Weapons of Minimum Destruction” http://www.spiked-online.com/Articles/0000000CA694.htm]

David C Rapoport, professor of political science at University of California, Los Angeles and editor of the Journal of Terrorism and Political Violence, has examined what he calls 'easily available evidence' relating to the historic use of chemical and biological weapons. He found something surprising - such weapons do not cause mass destruction. Indeed, whether used by states, terror groups or dispersed in industrial accidents, they tend to be far less destructive than conventional weapons. 'If we stopped speculating about things that might happen in the future and looked instead at what has happened in the past, we'd see that our fears about WMD are misplaced', he says. Yet such fears remain widespread. Post-9/11, American and British leaders have issued dire warnings about terrorists getting hold of WMD and causing mass murder and mayhem. President George W Bush has spoken of terrorists who, 'if they ever gained weapons of mass destruction', would 'kill hundreds of thousands, without hesitation and without mercy' (1). The British government has spent £28million on stockpiling millions of smallpox vaccines, even though there's no evidence that terrorists have got access to smallpox, which was eradicated as a natural disease in the 1970s and now exists only in two high-security labs in America and Russia (2). In 2002, British nurses became the first in the world to get training in how to deal with the victims of bioterrorism (3). The UK Home Office's 22-page pamphlet on how to survive a terror attack, published last month, included tips on what to do in the event of a 'chemical, biological or radiological attack' ('Move away from the immediate source of danger', it usefully advised). Spine-chilling books such as Plague Wars: A True Story of Biological Warfare, The New Face of Terrorism: Threats From Weapons of Mass Destruction and The Survival Guide: What to Do in a Biological, Chemical or Nuclear Emergency speculate over what kind of horrors WMD might wreak. TV docudramas, meanwhile, explore how Britain might cope with a smallpox assault and what would happen if London were 'dirty nuked' (4). The term 'weapons of mass destruction' refers to three types of weapons: nuclear, chemical and biological. A chemical weapon is any weapon that uses a manufactured chemical, such as sarin, mustard gas or hydrogen cyanide, to kill or injure. A biological weapon uses bacteria or viruses, such as smallpox or anthrax, to cause destruction - inducing sickness and disease as a means of undermining enemy forces or inflicting civilian casualties. We find such weapons repulsive, because of the horrible way in which the victims convulse and die - but they appear to be less 'destructive' than conventional weapons. 'We know that nukes are massively destructive, there is a lot of evidence for that', says Rapoport. But when it comes to chemical and biological weapons, 'the evidence suggests that we should call them "weapons of minimum destruction", not mass destruction', he says. Chemical weapons have most commonly been used by states, in military warfare. Rapoport explored various state uses of chemicals over the past hundred years: both sides used them in the First World War; Italy deployed chemicals against the Ethiopians in the 1930s; the Japanese used chemicals against the Chinese in the 1930s and again in the Second World War; Egypt and Libya used them in the Yemen and Chad in the postwar period; most recently, Saddam Hussein's Iraq used chemical weapons, first in the war against Iran (1980-1988) and then against its own Kurdish population at the tail-end of the Iran-Iraq war. In each instance, says Rapoport, chemical weapons were used more in desperation than from a position of strength or a desire to cause mass destruction. 'The evidence is that states rarely use them even when they have them', he has written. 'Only when a military stalemate has developed, which belligerents who have become desperate want to break, are they used.' (5) As to whether such use of chemicals was effective, Rapoport says that at best it blunted an offensive - but this very rarely, if ever, translated into a decisive strategic shift in the war, because the original stalemate continued after the chemical weapons had been deployed. He points to the example of Iraq. The Baathists used chemicals against Iran when that nasty trench-fought war had reached yet another stalemate. As Efraim Karsh argues in his paper 'The Iran-Iraq War: A Military Analysis': 'Iraq employed [chemical weapons] only in vital segments of the front and only when it saw no other way to check Iranian offensives. Chemical weapons had a negligible impact on the war, limited to tactical rather than strategic [effects].' (6) According to Rapoport, this 'negligible' impact of chemical weapons on the direction of a war is reflected in the disparity between the numbers of casualties caused by chemicals and the numbers caused by conventional weapons. It is estimated that the use of gas in the Iran-Iraq war killed 5,000 - but the Iranian side suffered around 600,000 dead in total, meaning that gas killed less than one per cent. The deadliest use of gas occurred in the First World War but, as Rapoport points out, it still only accounted for five per cent of casualties. Studying the amount of gas used by both sides from1914-1918 relative to the number of fatalities gas caused, Rapoport has written: 'It took a ton of gas in that war to achieve a single enemy fatality. Wind and sun regularly dissipated the lethality of the gases. Furthermore, those gassed were 10 to 12 times as likely to recover than those casualties produced by traditional weapons.' (7) Indeed, Rapoport discovered that some earlier documenters of the First World War had a vastly different assessment of chemical weapons than we have today - they considered the use of such weapons to be preferable to bombs and guns, because chemicals caused fewer fatalities. One wrote: 'Instead of being the most horrible form of warfare, it is the most humane, because it disables far more than it kills, ie, it has a low fatality ratio.' (8) 'Imagine that', says Rapoport, 'WMD being referred to as more humane'. He says that the contrast between such assessments and today's fears shows that actually looking at the evidence has benefits, allowing 'you to see things more rationally'. According to Rapoport, even Saddam's use of gas against the Kurds of Halabja in 1988 - the most recent use by a state of chemical weapons and the most commonly cited as evidence of the dangers of 'rogue states' getting their hands on WMD - does not show that unconventional weapons are more destructive than conventional ones. Of course the attack on Halabja was horrific, but he points out that the circumstances surrounding the assault remain unclear. 'The estimates of how many were killed vary greatly', he tells me. 'Some say 400, others say 5,000, others say more than 5,000. The fighter planes that attacked the civilians used conventional as well as unconventional weapons; I have seen no study which explores how many were killed by chemicals and how many were killed by firepower. We all find these attacks repulsive, but the death toll may actually have been greater if conventional bombs only were used. We know that conventional weapons can be more destructive.' Rapoport says that terrorist use of chemical and biological weapons is similar to state use - in that it is rare and, in terms of causing mass destruction, not very effective. He cites the work of journalist and author John Parachini, who says that over the past 25 years only four significant attempts by terrorists to use WMD have been recorded. The most effective WMD-attack by a non-state group, from a military perspective, was carried out by the Tamil Tigers of Sri Lanka in 1990. They used chlorine gas against Sri Lankan soldiers guarding a fort, injuring over 60 soldiers but killing none. The Tamil Tigers' use of chemicals angered their support base, when some of the chlorine drifted back into Tamil territory - confirming Rapoport's view that one problem with using unpredictable and unwieldy chemical and biological weapons over conventional weapons is that the cost can be as great 'to the attacker as to the attacked'. The Tigers have not used WMD since.

#### No extinction

Posner 5—Senior Lecturer, U Chicago Law. Judge on the US Court of Appeals 7th Circuit. AB from Yale and LLB from Harvard. (Richard, Catastrophe, http://goliath.ecnext.com/coms2/gi\_0199-4150331/Catastrophe-the-dozen-most-significant.html)

Yet the fact that Homo sapiens has managed to survive every disease to assail it in the 200,000 years or so of its existence is a source of genuine comfort, at least if the focus is on extinction events. There have been enormously destructive plagues, such as the Black Death, smallpox, and now AIDS, but none has come close to destroying the entire human race. There is a biological reason. Natural selection favors germs of limited lethality; they are fitter in an evolutionary sense because their genes are more likely to be spread if the germs do not kill their hosts too quickly. The AIDS virus is an example of a lethal virus, wholly natural, that by lying dormant yet infectious in its host for years maximizes its spread. Yet there is no danger that AIDS will destroy the entire human race. The likelihood of a natural pandemic that would cause the extinction of the human race is probably even less today than in the past (except in prehistoric times, when people lived in small, scattered bands, which would have limited the spread of disease), despite wider human contacts that make it more difficult to localize an infectious disease.

### DoD Shields

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

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

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

### Nuclear Winter

#### Most recent studies confirm even a small nuclear war would cause catastrophic climate change and nuclear winter

Steven Starr, Senior Scientist at Physicians for Social Responsibility, April 2008, “Catastrophic Climatic Consequences of Nuclear Conflict,” INESAP (International Network of Engineers & Scientists Against Proliferation) Bulletin #28, online: http://inesap.org/node/11

U.S. researchers have confirmed the scientific validity of the concept of “nuclear winter” and have demonstrated that any conflict which targets even a tiny fraction of the global nuclear arsenal against large urban centers will cause catastrophic disruptions of the global climate.

New studies show that a “regional” nuclear conflict, which targeted large population centers in the sub-tropics with 100 Hiroshima-size weapons – about 0.3% of the global nuclear arsenal –, could produce as many fatalities as World War II1 and would significantly disrupt the global climate for at least a decade.2 Following this “small” exchange, the world would rapidly experience cold conditions not felt since pre-industrial times.

U.S.-Russian arms accords have reduced by two-thirds the total number of nuclear weapons in the world’s nuclear arsenals since nuclear winter was first described in the 1980s. The new research confirms that the smoke produced by a war fought with the current global nuclear arsenal would still produce a nuclear winter.3 Under such conditions, daily minimum temperatures in the world’s large agricultural areas would fall below freezing for more than a year and cause the collapse of modern agriculture and the starvation of billions of people.