# NNSA DA

### Impact – Deterrence – Taiwan 2NC

#### U.S. nulear superiority is key to maintain the credibility of U.S. commitment to defend Taiwan

Payne ‘1

(Keith B.-, China Brief, “Post-Cold War Deterrence and a Taiwan Crisis”, Vol. 1 #5,

[http://www.jamestown.org/](http://www.jamestown.org/ programs/)

[programs/](http://www.jamestown.org/ programs/)chinabrief/single/?tx\_ttnews[tt\_news]=3746&tx\_ttnews[backPid]=191&no\_cache=1; Jacob)

To establish a deterrence policy suited to these circumstances, the United States would have to make blatantly clear its will and capability to defeat Chinese conventional and WMD attacks against Taiwan and against its own power projection forces. This would require the manifest capability to project sizable and suitable forces to the theater to demonstrate the U.S. commitment to Taiwan and to deny China any hope for a fait accompli. The U.S. would need to be, and to be seen as being, capable of intervening decisively to prevent China from subduing Taiwan before U.S. forces could be brought to bear.

Perhaps the most limiting factor for Washington in this regard is the obvious fact that U.S. intervention would risk escalation to a large-scale theater war and Chinese ICBM threats against the U.S. homeland. Preserving the credibility of U.S. deterrence commitments in such circumstances would require Chinese leaders to believe that Washington would persevere despite their nuclear threats and possible regional nuclear use. Washington would have to deny Chinese leaders confidence that such threats could deter U.S. intervention, a hope to which they would likely cling. Consequently, U.S. deterrence policy in this case could require that the United States be able to limit its own prospective losses to a level compatible with the stakes involved.

In sum, a U.S. deterrence policy for this case would focus on a "denial" deterrence threat, that is, a threat to defeat China militarily while significantly limiting potential U.S. civilian and military losses. The U.S. military posture supporting deterrence in this case would be capable of limiting prospective U.S. military and civilian losses, while also defeating China militarily, that is, a combination of offensive and defensive capabilities, including missile defense. The defensive side of this deterrence threat would be intended to bring the stakes involved for Washington into greater balance with the prospective costs and risks involved in a conflict with China.

#### Extinction

Strait Times ‘00

(June 25, “Regional Fallout: No one gains in war over Taiwan”, Lexis; Jacob)

THE high-intensity scenario postulates a cross-strait war escalating into a full-scale war between the US and China. If Washington were to conclude that splitting China would better serve its national interests, then a full-scale war becomes unavoidable.

Conflict on such a scale would embroil other countries far and near and -- horror of horrors -- raise the possibility of a nuclear war.

Beijing has already told the US and Japan privately that it considers any country providing bases and logistics support to any US forces attacking China as belligerent parties open to its retaliation.

In the region, this means South Korea, Japan, the Philippines and, to a lesser extent, Singapore.

If China were to retaliate, east Asia will be set on fire.

And the conflagration may not end there as opportunistic powers elsewhere may try to overturn the existing world order.

With the US distracted, Russia may seek to redefine Europe's political landscape. The balance of power in the Middle East may be similarly upset by the likes of Iraq.

In south Asia, hostilities between India and Pakistan, each armed with its own nuclear arsenal, could enter a new and dangerous phase.

Will a full-scale Sino-US war lead to a nuclear war?

According to General Matthew Ridgeway, commander of the US Eighth Army which fought against the Chinese in the Korean War, the US had at the time thought of using nuclear weapons against China to save the US from military defeat.

In his book The Korean War, a personal account of the military and political aspects of the conflict and its implications on future US foreign policy, Gen Ridgeway said that US was confronted with two choices in Korea -- truce or a broadened war, which could have led to the use of nuclear weapons.

If the US had to resort to nuclear weaponry to defeat China long before the latter acquired a similar capability, there is little hope of winning a war against China 50 years later, short of using nuclear weapons.

The US estimates that China possesses about 20 nuclear warheads that can destroy major American cities. Beijing also seems prepared to go for the nuclear option.

A Chinese military officer disclosed recently that Beijing was considering a review of its "non first use" principle regarding nuclear weapons.

Major-General Pan Zhangqiang, president of the military-funded Institute for Strategic Studies, told a gathering at the Woodrow Wilson International Centre for Scholars in Washington that although the government still abided by that principle, there were strong pressures from the military to drop it.

He said military leaders considered the use of nuclear weapons mandatory if the country risked dismemberment as a result of foreign intervention.

Gen Ridgeway said that should that come to pass, we would see the destruction of civilization.

There would be no victors in such a war. While the prospect of a nuclear Armageddon over Taiwan might seem inconceivable, it cannot be ruled out entirely, for China puts sovereignty above everything else.

### Turn Cyber

#### Deterrence is key to prevent cyberwarfare

Grossman Editor-in-Chief Inside the Air Force ‘9

(Elaine M.-, May 12, Global Security Newswire, “U.S. General Reserves Right to Use Force, Even Nuclear, in Response to Cyber Attack”, <http://www.globalsecuritynewswire.org/gsn/nw_20090512_4977.php>; Jacob)

The top U.S. commander for strategic combat said last week that the White House retains the option to respond with physical force -- potentially even using nuclear weapons -- if a foreign entity conducts a disabling cyber attack against U.S. computer networks (see GSN, Nov. 7, 2008).

While a nuclear response appears highly unlikely, it might be counted among a full range of options offered to the president following a major computer attack, suggested Gen. Kevin Chilton, who heads U.S. Strategic Command. However, the general noted, it might be no easy task to identify with certainty the origin of a cyber strike.

"I think you don't take any response options off the table from an attack on the United States of America," he told reporters during a Defense Writers Group breakfast on Thursday. "Why would we constrain ourselves on how we respond?"

Hackers located in China are believed to have carried out a growing number of computer intrusions, most recently accessing large amounts of data on the Defense Department's $300 billion Joint Strike Fighter program, the Wall Street Journal reported last month. Earlier reported incidents include cyber break-ins of the U.S. electrical power grid, where suspected Chinese and Russian hackers left behind software that could be activated later to disrupt service.

Should the breaches evolve into more serious computer attacks against the United States, Chilton said he could not rule out the possibility of a military salvo against a nation like China, even though Beijing has nuclear arms. He rejected the idea that such a conflict would necessarily risk going nuclear.

"I don't think that's true," Chilton said.

At the same time, the general insisted that all strike options, including nuclear, would remain available to the commander in chief in defending the nation from cyber strikes.

### Turns Case – Prolif

#### DA is a bigger internal link to prolif – US nuclear assurance reduces the benefit of proliferation – supply is not the issue

Ruhle, ‘9, [Michael, Head of Policy Planning, NATO International Staff, “NATO and Extended Deterrence in a Multinucelar World” NATO Summit 2009, Comparative Strategy, 28:1January 1, 2009, p 10-16]

Developments since the 1980s show that the widespread assumption, that past non-proliferation successes were the result of the NPT, is highly questionable. The fact that almost all states have signed up to this treaty is a huge success, yet it does not reflect the emergence of a global norm. The reason why most states never pursued a nuclear weapons programme, or terminated ongoing programmes, is to be found in a cost-benefit calculus. For most nations, becoming a nuclear weapons state never offered sufficient military advantages to warrant the enormous financial costs and political ramifications. However, a change in a nation's political and military environment can also lead to a change in its cost-benefit calculus. After all. nuclear abstinence in pivotal geopolitical regions is not a law of nature. Rather, it remains contingent on a predictable (i.e.. US-guaranteed) international order. It is no coincidence that indications of a nuclear domino effect have become visible exactly in those regions where doubts about the US commitment are most serious.

### Turns Case – Terror

#### Deterrence solves nuclear terror

Talmadge PhD Candidate Security Studies MIT ‘7

(Caitlin-, Spring, The Washington Quarterly, “Deterring a Nuclear 9/11”, Vol. 30 #2, <http://www.twq.com/07spring/> docs/07spring\_talmadge.pdf; Jacob)

Because terrorists lack return addresses, analysts have dismissed even more firmly the possibility of deterrence by punishment, or the threat to impose unbearable costs on those who would do the United States harm. This disheartening conclusion stems from a failure to appreciate the many steps terrorists must take before committing an actual attack. Many of these steps depend on assistance from people and organizations that may not be as impervious to deterrence by punishment as individual terrorists are. If the United States can broaden the range of actors it seeks to deter and convince these other actors that cooperating with terrorists is not in their interests, it may be able to reduce the likelihood of a terrorist attack substantially.13

Nowhere is this approach more plausible than in the case of nuclear terrorism.14 Unlike other forms of terrorism in which terrorists are more or less self-sufficient, it is virtually impossible for terrorists to create their own nuclear material, regardless of which ingredient they use. Producing plutonium requires sophisticated, expensive reactors, as well as reprocessing facilities. Enriching uranium to a weapons-grade level can be done through several techniques; all require relatively large buildings and advanced technologies.15 Both paths to nuclear material require a sizable and scientifically knowledgeable labor force, significant industrial resources, and time. Weapons design and delivery pose additional obstacles. States such as Argentina, Iran, Iraq, and Libya have tried to produce nuclear weapons and failed. Aum Shinrikyo, one of the best-funded terrorists groups in history and instigator of the 1995 sarin gas attacks in Tokyo, was also unable to create its own nuclear material and had to attempt to buy it from Russia.16

As such, it is extremely likely that states or substate military organizations would have to be involved in the tacit or overt provision of nuclear material to terrorists. A state could directly and deliberately transfer a weapon or materials to terrorists. It could refuse to halt or punish those in the military or scientific community who sell material or weapons to terrorists. It could willfully neglect nuclear security or choose not to alert the international community to suspected thefts of material or weapons. It could turn a blind eye to terrorist activities occurring on its territory.

In all of these cases, the United States does have a target against which it can direct threats of retaliation: the governments or military and scientific establishments that actively or passively assist aspiring nuclear terrorists. Even if the United States cannot deter individual terrorists, it can create strong incentives for these other actors to block terrorist acquisition of the ingredients required for a nuclear attack. They have addresses, lives, and property that the United States can hold hostage to their wholehearted cooperation. As Paul Davis and Brian Jenkins of RAND have argued, “The United States could announce credibly that … it would punish not only active supporters, but even those states and factions that merely tolerate the terrorists or indirectly facilitate their acquisition of [weapons of mass destruction (WMD)]. The purpose would be to so alarm heads of state and heads of substate organizations that they would work actively to get rid of elements that might bring Turns Case – Cyber

### UQ

#### NNSA workforce strong now

GAO-12-468, Apr 26, 2012, St rategies and Challenges in Sustaining Critical Skills in Federal and Contractor Workforces, <http://www.gao.gov/products/GAO-12-468>

The National Nuclear Security Administration (NNSA) and its M&O contractors have developed and implemented multifaceted strategies to recruit, develop, and retain both the federal and contractor workforces needed to preserve critical skills in the enterprise. NNSA’s recruiting and retention efforts for its federal staff focus on attracting early career hires with competitive pay and development opportunities. Its development efforts generally rely on two key programs to develop its critically skilled workforce––one that identifies needs and another that identifies the qualifications necessary to meet them. For strategic planning purposes, NNSA is also undertaking a comprehensive reassessment and analysis of staffing requirements to ascertain future federal workforce requirements. M&O contractors’ recruitment and retention strategies vary from site to site, but each site focuses on maintaining competitive compensation packages. Their development efforts vary in approach and scope and face some challenges––particularly in preserving underground nuclear testing skills. To assess the effectiveness of its own––and its M&O contractors’––strategies for recruiting, developing, and retaining the workforces needed to preserve critical skills, NNSA monitors key human capital metrics. NNSA focuses on two key metrics in assessing its own strategies—the time it takes to hire a new employee and its attrition rates. To assess the effectiveness of its contractors’ strategies, NNSA monitors key human capital metrics using data that M&O contractors collect, including acceptance rates, attrition rates, comparability of pay and benefits with peer institutions, and the ability to fill a critical skills position within a certain number of days. M&O contractors assess key human capital performance measures, but these metrics do not have standardized definitions. For example, one of the M&O contractors’ key metrics—acceptance rates for offers of employment—may not be consistently measured across the enterprise. Without this information, NNSA’s ability to monitor the effectiveness of its and its M&O contractors’ strategies to recruit, develop, and retain the workforces needed to preserve critical skills may be hindered. In particular, without common enterprise-wide definitions of human capital performance metrics, NNSA may not be able to collect consistent and comparable data across all eight sites in the enterprise. The enterprise’s work environments and site locations pose recruiting challenges, and NNSA and its M&O contractors face shortages of qualified candidates, among other challenges. For example, staff must often work in secure areas that prohibit the use of personal cell phones, e-mail, and social media, which is a disadvantage in attracting younger skilled candidates. In addition, many sites are geographically isolated and may offer limited career opportunities for candidates’ spouses. Critically skilled positions also require security clearances—and therefore U.S. citizenship—and a large percentage of students graduating from top science, technology, and engineering programs are foreign nationals. The pool of qualified candidates is also attractive to high technology firms in the private sector, which may offer more desirable work environments. NNSA and its M&O contractors are taking actions to address these challenges where possible, including streamlining hiring and security clearance processes and taking actions to proactively identify new scientists and engineers to build a pipeline of critically skilled candidates.

#### NNSA is making corrections to shortages – it’s on the brink

GAO – February 2011, DOE's Contract Management for the National Nuclear Security Administration and Office of Environmental Management, http://www.gao.gov/highrisk/risks/federal-contracting/doe.php

DOE has continued to take many steps to address contract and project management weaknesses including 1) demonstrating strong commitment and top leadership support, 2) developing a corrective action plan that identifies effective solutions, 3) and demonstrating progress implementing corrective measures. These are three of the five criteria for removal from GAO's High-Risk List. In March 2009, GAO testified that DOE was managing over 100 construction projects with estimated costs over $90 billion and 97 nuclear waste cleanup projects with estimated costs over $230 billion. GAO found that 8 of the 10 major NNSA and EM construction projects (DOE defines a major project as any project greater than or equal to $750 million) that GAO reviewed had exceeded the initial cost estimates for completing these projects. In total, DOE added $14 billion to these initial estimates. GAO also found that 9 of the 10 major construction projects were behind schedule. In total, DOE added more than 45 years to the initial schedule estimates for these projects. Over the last 2 years, DOE has updated program and project management guidance to improve the reliability of project cost estimates, better assess project risks, and ensure that project reviews are timely and useful and identify problems early. DOE has also restructured its portfolio of projects to distinguish between capital asset projects and operating projects and has taken steps to break large projects into smaller, more manageable components when possible. DOE officials stated that these and other changes will improve project performance. The steps DOE has taken are very important, but have not yet consistently improved contract and management performance in EM and NNSA. Problems at EM included the following: GAO's reviews of cost estimates for two large projects—construction of a $1.3 billion Salt Waste Processing Facility at the Savannah River Site in South Carolina and decontamination and decommissioning at the Y-12 National Security Complex in Tennessee that DOE estimates will cost between $1.1 billion and $1.2 billion—found that the estimates did not exemplify the four characteristics of high-quality cost estimates. Specifically, best practices establish that high-quality cost estimates must be credible, well-documented, accurate, and comprehensive. GAO also found that another large EM project—emptying, cleaning, and closing large underground liquid radioactive waste tanks at the Savannah River Site—has experienced a $1.4 billion increase in its estimated cost from $3.2 billion to $4.6 billion because, among other things, DOE's cost estimate that formed the basis of its contractor's initial proposal was inaccurate. In addition, of the 91 EM cleanup projects funded with $6 billion in Recovery Act funds, nearly one-third were not meeting cost or schedule targets when GAO reviewed them, although more recent information indicates cost and schedule performance on these projects has improved. These Recovery Act projects were generally smaller and simpler than some of EM's other cleanup work. DOE has also recently renegotiated commitments with the Environmental Protection Agency and the state of Washington that move out DOE's promise to complete the treatment of the Hanford Site's radioactive waste by nearly 20 years. Cleaning up the entire site will cost the department tens of billions to over a hundred billion dollars. NNSA has also experienced problems. Specifically: GAO found that NNSA cannot accurately identify the total costs to operate and maintain its nuclear weapons facilities because NNSA does not have a mechanism to reconcile the differences in site contractors' accounting practices. As a result, NNSA lacks the management information necessary to make cost-benefit decisions on infrastructure investment. NNSA's project to construct a new Uranium Processing Facility at the Y-12 National Security Complex has experienced a nearly sevenfold cost increase from its 2004 estimate of between $600 million and $1.1 billion to its current estimate of between $4.2 and $6.5 billion. Moreover, NNSA does not expect all technologies for this facility to be mature enough before critical decisions on cost and schedule are made. GAO found that NNSA's plans to modernize its Kansas City Plant were based on an inadequate cost estimate. Specifically, NNSA based its cost estimate of leasing a new facility versus constructing one itself upon an arbitrary 20-year horizon rather than on the estimated actual lifespan of the facility. As a result, NNSA's financing decisions were not as fully informed or as transparent as they could have been. Constructing a new Uranium Processing Facility, modernizing the Kansas City Plant, and constructing a major new nuclear facility at NNSA's Los Alamos National Laboratory are cornerstones of NNSA's multibillion dollar transformation of the nuclear weapons complex and exemplify high-risk endeavors by NNSA that GAO will continue to monitor closely. In its corrective action plan, DOE recognized that having sufficient people and other resources to resolve its contract and project management problems was one of the top 10 issues facing the department. Specifically, the plan said that the department lacked an adequate number of federal contracting and project personnel with the appropriate skills (such as cost estimating, risk management, and technical expertise) to plan, direct, and oversee project execution. These challenges are likely to continue as DOE's workforce ages and the department faces future budget constraints. Both EM and NNSA are taking steps to assess current and future staffing needs and are in the process of developing plans to address the shortfalls.

### Link – SMR

#### (Note that the Klein ev is about small reactors)

#### SMRs generate huge demand for nuclear engineers and operators

US Department of Commerce, 11

("The Commercial Outlook for U.S. Small Modular Nuclear Reactors," 2-17-11, trade.gov/mas/ian/build/groups/public/@tg\_ian/@nuclear/documents/webcontent/tg\_ian\_003185.pdf, accessed 9-15-12,)

Impact of SMRs on U.S. Job Creation 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 localization that is typically necessary for building larger reactors.

#### SMR’s are uniquely draining

PR Chari - Research Professor, IPCS - 11 May 2010, MODULAR NUCLEAR REACTORS AND BREEDER TECHNOLOGY, http://www.ipcs.org/seminar/nuclear/modular-nuclear-reactors-and-breeder-technology-842.html

The other technological challenge is small modular reactors (SMR) which is being promoted by the United States. President Obama has requested $39 million for a new program to get SMR designs licensed for widespread commercial use. SMRs have compact designs, could be made in factories and transported to sites by truck or rail, they reduce capital costs and construction time, and increase flexibility by being able to be added or withdrawn as demand increases or decreases. Therefore, they are suitable for small electrical grids or for being established in isolated places or for replacing fossil fuel plants. The downside of SMR’s is that the level of expertise that is required for their operation is no less than what is required to run a large commercial plant; besides the safety and security issues multiply due to their scattered locations. There are personnel issues that also arise from the need to post qualified persons to remote places, which makes it difficult to recruit them.

### Link – Military

#### DOD would hire massive numbers of new personnel

King, Associate Director of Research and Associate Research Professor of International Affairs at George Washington, 11

(March, Feasibility of Nuclear Power on U.S. Military Installations, http://www.cna.org/research/2011/feasibility-nuclear-power-us-military)

The most basic licensing issue relates to whether NRC will have jurisdiction over potential nuclear reactor sites or whether DoD could be self-regulating. Our conversations with NRC indicate it is the only possible licensing authority for reactors that supply power to the commercial grid. However, DOE and DoD are authorized to regulate mission critical nuclear facilities under Section 91b of the Atomic Energy Act. There is some historical precedent for DoD exercising this authority. For example, the Army Nuclear Program was granted exception under this rule with regard to the reactor that operated aboard the Sturgis barge in the 1960s and 1970s [44]. It seems unlikely that DoD would pursue exemption under Section 91b in the future.10 Regulating power plants is a function that lies beyond DoD's core mission. The Department and the military services are unlikely to have personnel with sufficient expertise to act as regulators for nuclear power plants, and it could take considerable time and resources to develop such expertise. Without NRC oversight DoD would bear all associated risks. The time required to obtain design certification, license, and build the next generation of nuclear plants is about 9 to 10 years. After the first plants are built it may be possible to reduce the time required for licensing and construction to approximately 6 years [45]. The timeline for certification, licensing, and construction projected by DOE for a small nuclear power plant based on an SMR is shown in figure 5 [46].

### A2: DOD Retraining

#### You can’t train someone to be a nuclear scientist – it takes years – that’s GAO – means the aff hires people in the short term or doesn’t solve

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#### DOD doesn’t retrain- it contracts- see Blackwater

# Case

## Grid

### T/F

#### DoD won’t use is “mission-critical” exception to get around the NRC

King, Associate Director of Research and Associate Research Professor of International Affairs at George Washington, 11

(March, Feasibility of Nuclear Power on U.S. Military Installations, http://www.cna.org/research/2011/feasibility-nuclear-power-us-military)

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#### That means nothing happens until 2020

King, Associate Director of Research and Associate Research Professor of International Affairs at George Washington, 11

(March, Feasibility of Nuclear Power on U.S. Military Installations, http://www.cna.org/research/2011/feasibility-nuclear-power-us-military)

Safety is always a concern for nuclear power. That is why the NRC was established and maintains stringent rules, regulations, and procedures. Existing nuclear power plants in the United States have been operating for decades with excellent safety records. NRC staff have indicated that the new small reactors being considered are expected to have even higher levels of safety than the larger reactors currently being operated. Finding specific sites for nuclear power plants on or near military installations will be challenging. There are many considerations that affect whether a site is appropriate. Some of the considerations relate to safety and others to limiting risks of attack or sabotage, and still others to public opinion. Being located on a military installation provides some advantages, but it also imposes some constraints on how portions of the installation near the nuclear power plant can be used. Trade-offs will be required. Designs for small reactors are at various levels of technological readiness and some are about to begin the NRC licensing process, but none have been licensed or constructed yet. Consequently, there are a number of unresolved certification, licensing, and regulatory issues. The size of the emergency planning zone that should surround the reactor is an example of such an issue. Resolving these issues will take time and resources. NRC representatives have indicated that they expect these issues could be resolved by the middle of the decade and that a plant could be built and operating by about 2020.

### No Internal

Not island- King and Baker-

-Small plants solve needs of bases

-Too big power providing is too costly- DoD would feed back into grid

-Grid = cyber-attack still remotely shut down

-Fear of waste and accessing SMRs during an accident stokes public backlash- prevent DoD utilization

SQ solves- King and Baker-

-Natural gas, coal- reserves last “30 years”- sufficient for one short term blackout- ev doesn’t assume switching to mission critical capabilities

#### Nuclear backup capacity fails- other energy sources solve without cost and technical hurdles

Ryan, Masters in Mech. Engineering, 2011

[Dylan, Masters in Mechanical Engineering, expertise in energy, sustainability, Computer Aided Engineering, renewables technology; PhD in solar energy systems, “Part 10 – Small modular reactors and mass production options,” http://daryanenergyblog.wordpress.com/ca/part-10-smallreactors-mass-prod/-http://daryanenergyblog.wordpress.com/ca/part-10-smallreactors-mass-prod/]

One of the other advantages of small or micro sized reactors, the ability to provide power for micro grids, may not be all its cracked up to be. In many cases a combination of renewables backed up by biomass fuel, or fossil fuels often works out cheaper and more practical. One example often sited for these modular reactors is remote Artic stations and military bases. However, putting a reactor here ignores certain realties, notably that such sites are usually only occupied for part of the year. Artic stations often shut down over the winter with most of the serious scientists going home. The rest of the year a small skeleton crew keeps things running and basically keep digging the place out of the snow. By keeping a reactor on site we greatly increase the size of this skeleton crew (even a turnkey reactor needs someone to look after it!). Once you factor in the increased costs imposed by this, plus the higher capital costs of the nuclear plant to begin with, plus the difficulty of getting it and many tons of concrete (to provide radiation shielding) out to the middle of a wilderness, you realise it would be much cheaper just sticking with a diesel generator and shipping in the fuel. Indeed even the DEW line radar sites which operated from the 1950’s to 1990’s year round deep within the Canadian Artic, were powered by diesel generators. The idea of nuclear power was indeed floated, but dropped as impractical and too costly. As far as active military bases, there is the tactical issue of shipping the reactors in (if I were the enemy I know when I’d chose to attack!) plus the small matter of running or refuelling a nuclear reactor while under fire from incoming artillery!

### No Impact

Reed 12 (John, national security reporter for Foreign Policy, University of New Hampshire with a dual degree in international affairs and history, "U.S. energy companies victims of potentially destructive cyber intrusions," Oct 11, [killerapps.foreignpolicy.com/posts/2012/10/11/us\_energy\_companies\_victims\_of\_potentially\_destructive\_cyber\_attacks])

Panetta said that the Defense Department, largely via the National Security Agency, is "acting aggressively to get ahead of this problem -- putting in place measures to stop cyber attacks dead in their tracks" under a whole-of-government effort.

"For these kinds of scenarios, the [Defense Department] has developed that capability to conduct effective operations to counter threats to our national interests in cyberspace."

#### **No impact to cyber-attacks or blackouts**

Birch, former AP correspondent, 2012,

10-1, Douglas, former foreign correspondent for the Associated Press and the Baltimore Sun who has written extensively on technology and public policy. “Forget Revolution,” <http://www.foreignpolicy.com/articles/2012/10/01/forget_revolution?page=full>

But the scenarios sketched out above are not solely the realm of fantasy. This summer, the United States and India were hit by two massive electrical outages -- caused not by ninja cyber assault teams but by force majeure. And, for most people anyway, the results were less terrifying than imagined.¶ First, the freak "derecho" storm that barreled across a heavily-populated swath of the eastern United States on the afternoon of June 29 knocked down trees that crushed cars, bashed holes in roofs, blocked roads, and sliced through power lines.¶ According to an August report by the U.S. Department of Energy, 4.2 million homes and businesses lost power as a result of the storm, with the blackout stretching across 11 states and the District of Columbia. More than 1 million customers were still without power five days later, and in some areas power wasn't restored for 10 days. Reuters put the death toll at 23 people as of July 5, all killed by storms or heat stroke.¶ The second incident occurred in late July, when 670 million people in northern India, or about 10 percent of the world's population, lost power in the largest blackout in history. The failure of this huge chunk of India's electric grid was attributed to higher-than-normal demand due to late monsoon rains, which led farmers to use more electricity in order to draw water from wells. Indian officials told the media there were no reports of deaths directly linked to the blackouts.¶ But this cataclysmic event didn't cause widespread chaos in India -- indeed, for some, it didn't even interrupt their daily routine. "[M]any people in major cities barely noticed the disruption because localized blackouts are so common that many businesses, hospitals, offices and middle-class homes have backup diesel generators," the New York Times reported.¶ The most important thing about both events is what didn't happen. Planes didn't fall out of the sky. Governments didn't collapse. Thousands of people weren't killed. Despite disruption and delay, harried public officials, emergency workers, and beleaguered publics mostly muddled through.¶ The summer's blackouts strongly suggest that a cyber weapon that took down an electric grid even for several days could turn out to be little more than a weapon of mass inconvenience.¶ "Reasonable people would have expected a lot of bad things to happen" in the storm's aftermath, said Neal A. Pollard, a terrorism expert who teaches at Georgetown University and has served on the United Nation's Expert Working Group on the use of the Internet for terrorist purposes. However, he said, emergency services, hospitals, and air traffic control towers have backup systems to handle short-term disruptions in power supplies. After the derecho, Pollard noted, a generator truck even showed up in the parking lot of his supermarket.¶ The response wasn't perfect, judging by the heat-related deaths and lengthy delays in the United States in restoring power. But nor were the people without power as helpless or clueless as is sometimes assumed.¶ That doesn't mean the United States can relax. James Lewis, director of the technology program at the Center for Strategic and International Studies, believes that hackers threaten the security of U.S. utilities and industries, and recently penned an op-ed for the New York Times calling the United States "defenseless" to a cyber-assault. But he told Foreign Policy the recent derecho showed that even a large-scale blackout would not necessarily have catastrophic consequences.¶ "That's a good example of what some kind of attacks would be like," he said. "You don't want to overestimate the risks. You don't want somebody to be able to do this whenever they felt like it, which is the situation now. But this is not the end of the world."

#### Too difficult to launch a cyber-attack and economic, military factors check full-scale attacks

Birch, former AP correspondent, 2012,

10-1, Douglas, former foreign correspondent for the Associated Press and the Baltimore Sun who has written extensively on technology and public policy. “Forget Revolution,” <http://www.foreignpolicy.com/articles/2012/10/01/forget_revolution?page=full>

But pulling off a cyber assault on that scale is no easy feat. Weiss agreed that hackers intent on inflicting this kind of long-term interruption of power would need to use a tool capable of inflicting physical damage. And so far, the world has seen only one such weapon: Stuxnet, which is believed to have been a joint military project of Israel and the United States.¶ Ralph Langner, a German expert on industrial-control system security, was among the first to discover that Stuxnet was specifically designed to attack the Supervisory Control and Data Acquisition system (SCADA) at a single site: Iran's Natanz uranium-enrichment plant. The computer worm's sophisticated programs, which infected the plant in 2009, caused about 1,000 of Natanz's 5,000 uranium-enrichment centrifuges to self-destruct by accelerating their precision rotors beyond the speeds at which they were designed to operate.¶ Professionals like Weiss and others warned that Stuxnet was opening a Pandora's Box: Once it was unleashed on the world, they feared, it would become available to hostile states, criminals, and terrorists who could adapt the code for their own nefarious purposes. But two years after the discovery of Stuxnet, there are no reports of similar attacks against the United States. What has prevented the emergence of such copycat viruses?¶ A 2009 paper published by the University of California, Berkeley, may offer the answer. The report, which was released a year before Stuxnet surfaced, found that in order to create a cyber weapon capable of crippling a specific control system ­­-- like the ones operating the U.S. electric grid -- six coders might have to work for up to six months to reverse engineer the targeted center's SCADA system.¶ Even then, the report says, hackers likely would need the help of someone with inside knowledge of how the network's machines were wired together to plan an effective attack. "Every SCADA control center is configured differently, with different devices, running different software/protocols," wrote Rose Tsang, the report's author.¶ Professional hackers are in it for the money -- and it's a lot more cost-efficient to search out vulnerabilities in widely-used computer programs like the Windows operating system, used by banks and other affluent targets, than in one-of-a-kind SCADA systems linked to generators and switches.¶ According to Pollard, only the world's industrial nations have the means to use the Internet to attack utilities and major industries. But given the integrated global economy, there is little incentive, short of armed conflict, for them to do so. "If you're a state that has a number of U.S. T-bills in your treasury, you have an economic interest in the United States," he said. "You're not going to have an interest in mucking about with our infrastructure."¶ There is also the threat of retaliation. Last year, the U.S. government reportedly issued a classified report on cyber strategy that said it could respond to a devastating digital assault with traditional military force. The idea was that if a cyber attack caused death and destruction on the scale of a military assault, the United States would reserve the right to respond with what the Pentagon likes to call "kinetic" weapons: missiles, bombs, and bullets.¶ An unnamed Pentagon official, speaking to the Wall Street Journal, summed up the policy in less diplomatic terms: "If you shut down our power grid, maybe we will put a missile down one of your smokestacks."¶ Deterrence is sometimes dismissed as a toothless strategy against cyber attacks because hackers have such an easy time hiding in the anonymity of the Web. But investigators typically come up with key suspects, if not smoking guns, following cyber intrusions and assaults -- the way suspicions quickly focused on the United States and Israel after Stuxnet was discovered. And with the U.S. military's global reach, even terror groups have to factor in potential retaliation when planning their operations.

### Discount their ev

#### Reed evidence

"We know that foreign cyber actors are probing America's critical infrastructure networks," said Panetta

#### Andres + Beretz

. 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.

states either have or are working on developing the ability to take down the U.S. grid

## Iran

### No Offer

-export restrictions- Obama wouldn’t want to domestically look weak

-If so, no timeframe solve- have to develop first

-Iran not trust our reactors because we try sabotage before

### Prefer Neg Ev 2NC

Go brink- cite Khomeni reasoning and desire for capable but fear retaliation- Kreonig

Conceded deterrence solves- fear drives their poliics for regime survival

#### Prefer our ev- your authors don’t understand Iranian politics

Johan Bergenas- Research Associate at the Henry L. Stimson Center- August 31, 2010, Dismantling Worst-Case Proliferation Scenarios, Foreign Affairs, http://www.foreignaffairs.com/articles/66738/johan-bergenas/the-nuclear-domino-myth

Such mistaken beliefs are due in part to the West's poor understanding of Iran. After more than 30 years of severed diplomatic, cultural, and educational relations with the country, the West knows little about Iran's leadership, national aspirations, and culture. Because of this, policymakers have a difficult time thinking about the implications of a nuclear Iran and resort to simplistic grandstanding, reprising outdated political fears that lack historical nuance or modern perspective. The exaggerated fears have been useful, too: had the United States not presented Iran's nuclear aspirations in the darkest of lights, it may not have been able to gain support for four rounds of UN sanctions against the Islamic Republic in the last few years.

### Threshold 2NC

#### Iran won’t build a nuke

Duss, author @ Think Progress, 5-11-12,

Matt, Think Progress, “Deconstructing Krauthammer’s Misinformation On Iran And Israel,” <http://thinkprogress.org/security/2012/05/11/482470/deconstructing-krauthammer-iran/>

First, with regard to an Iranian nuclear weapon, while Iran still has yet to answer key questions from the International Atomic Energy Agency (IAEA) about the nature of its nuclear work, the current position of both U.S. and Israeli intelligence is that the Iranian government has not yet made a decision to obtain a nuclear weapon. In an interview last month, Israeli Defense Forces Chief of Staff Lt. Gen. Benny Gantz said Iran “is going step by step to the place where it will be able to decide whether to manufacture a nuclear bomb. It hasn’t yet decided whether to go the extra mile.” Surveying the enormous pressure being brought to bear on Iran, Gantz continued, “I believe he [Iranian Supreme Leader Khamenei] would be making an enormous mistake” by manufacturing a nuclear bomb, “and I don’t think he will want to go the extra mile.”

### Timeframe 2NC

#### Iranian prolif would take a year and wouldn’t produce a large arsenal

Kahl, associate professor @ Georgetown, 2012,

June. Dr. Colin H. Kahl is a Senior Fellow at the Center for a New American Security and an associate professor in the Security Studies Program at Georgetown University’s Edmund A. Walsh School of Foreign Service. Melissa G. Dalton is a Visiting Fellow at the Center for a New American Security. Matthew Irvine is a Research Associate at the Center for a New American Security. “Risk and Rivalry Iran, Israel and the Bomb,” <http://www.cnas.org/files/documents/publications/CNAS_RiskandRivalry_Kahl_0.pdf>

Credible estimates, based on data from the U.N. International Atomic Energy Agency (IAEA), suggest that Iran has already developed a “near threshold” nuclear weapons capability – that is, the technical capability to develop nuclear weapons within a few years. The Institute for Science and International Security concludes that Iran’s current stockpile of 3.5 percent low-enriched uranium (LEU), if further enriched to weapons-grade uranium (WGU, typically defined as enrichment above the 90 percent level), would produce enough fissile material for five nuclear weapons. Given the number of current-generation IR-1 centrifuges at Iran’s Natanz and Fordow enrichment facilities, it would presently take Iran at least four months between deciding to “dash” for a bomb and producing sufficient WGU for a single weapon. (Iran would still require additional time to simultaneously fashion other components for a device). Iran also continues to produce 19.75 percent LEU at the Natanz pilot plant and at Fordow, ostensibly to fuel the Tehran Research Reactor and produce medical isotopes to treat cancer patients. Enriching uranium to 19.75 percent accomplishes about 90 percent of the effort required to reach weapons grade level, so Iran could substantially reduce the time required to produce WGU for a single weapon if it accumulated a sufficient stockpile of 19.75 LEU over the next year. The installation of additional IR-1 centrifuges at Natanz and Fordow, or the large-scale installation of much more efficient next generation (IR-2m or IR-4) centrifuges still under development at the Natanz pilot plant, could compress the timeline even further. 7 All told, given the four months that it would take to produce fissile material and the additional time required to simultaneously overcome remaining technical hurdles associated with weaponization, Iran probably has the capability to produce a crude testable nuclear device within about a year of deciding to do so. 8 Fashioning a device that could be used effectively against Iran’s adversaries would likely take longer.

### AT: Israel First Strike

#### Iranian nukes won’t cause Israel first strike

Kahl, associate professor @ Georgetown, 2012,

June. Dr. Colin H. Kahl is a Senior Fellow at the Center for a New American Security and an associate professor in the Security Studies Program at Georgetown University’s Edmund A. Walsh School of Foreign Service. Melissa G. Dalton is a Visiting Fellow at the Center for a New American Security. Matthew Irvine is a Research Associate at the Center for a New American Security. “Risk and Rivalry Iran, Israel and the Bomb,” <http://www.cnas.org/files/documents/publications/CNAS_RiskandRivalry_Kahl_0.pdf>

Despite an apparent logic encouraging each side to strike first in such situations, several factors mitigate the risk. Israeli fears of surprise attack might be significant, but Israel will also face compelling reasons not to pre-emptively use nuclear weapons in a crisis. Because of its official policy of nuclear opacity, Israel has never articulated its nuclear doctrine. Nevertheless, on the basis of observed behavior and deductive analysis, specialists on Israel’s alleged nuclear capabilities speculate that the primary purpose of these capabilities is to deter an all-out conventional attack or the use of WMD by regional adversaries that would threaten Israel’s existence or – should deterrence and defense fail – to provide a weapon of last resort in the face of imminent defeat. 152 In a nuclear crisis with Iran, it is unclear what threshold of “imminent threat” would lead Israeli leaders to contemplate the first use of nuclear weapons, but the basic logic of the strategic situation suggests that the threshold would have to be very high. Somewhat paradoxically, Israel’s lack of strategic depth and its sense of extreme vulnerability – the factors that supposedly drive pre-emption incentives – also drive the threshold for a successful Israeli first strike so high that it may rule out nuclear pre-emption. If a hypothetical Iranian nuclear arsenal paralleled the country’s current “civilian” nuclear program, Iran would be likely to use a combination of dispersal and concealment (including hardened underground sites) to protect its embryonic nuclear weapons stockpile. Thus, even during the initial period when Iran’s arsenal would be small and theoretically vulnerable, there is reason to believe that Israel would lack perfect information about the whereabouts and readiness of these weapons – and, consequently, Israel would lack confidence that it could destroy all of them. Moreover, when and if Iran developed missiledeliverable nuclear weapons, it would likely focus on solid-fuel missiles (such as the Sejjil-2) that could be fired on very short notice from fixed hardened silos and road-mobile launchers. 153 The latter would probably be very difficult for the Israelis to detect and pre-emptively destroy with confidence during a crisis (see text box). 154 Israel’s apparent nuclear superiority notwithstanding, even a small Iranian arsenal might therefore be able to survive. There are so many variables and unknowns that it is difficult to predict the success of future pre-emptive Israeli strikes on Iranian nuclear missiles. Yet the uncertainty surrounding those variables is precisely why the probability of achieving 100 percent success seems remote and why a pre-emptive strike during a crisis may be highly unattractive. There is a nontrivial probability that some Iranian weapons would survive an Israeli first strike, and the strike itself would significantly increase the prospects that Iran would retaliate using its residual arsenal. Perhaps Israel’s increasingly robust ballistic missile defenses would prove sufficient to detect incoming decoys, defeat countermeasures and destroy Iran’s remaining nuclear missiles, but the margin for error would be terrifying for Israeli political and military leaders contemplating initiating a nuclear exchange. Ultimately, if the motivation for pre-emption stems from the notion that Israeli leaders could not tolerate any risk of an Iranian nuclear attack, they dare not pre-empt. Moreover, as the Iranian arsenal grows over time, Israel’s ability to pull off a successful first strike – and thus its incentive to launch one in a crisis – will decline even further.

#### Israel won’t freak out

Duss, author @ Think Progress, 5-11-12,

Matt, Think Progress, “Deconstructing Krauthammer’s Misinformation On Iran And Israel,” <http://thinkprogress.org/security/2012/05/11/482470/deconstructing-krauthammer-iran/>

Finally, Krauthammer’s rendering of Israel standing alone against a gathering threat is simply not accurate. Not only has the Obama administration extended U.S. military support and deepened intelligence cooperation with Israel over the Iranian nuclear issue, it has also forged, with considerable diplomatic effort, a broad and durable international coalition toward addressing that issue. There may be disagreements as to the exact timing and strategy, but Israel is in no sense on its own. As Lt. Gen. Gantz put it, “The state of Israel is the strongest in the region and will remain so. Decisions can and must be made carefully, out of historic responsibility but without hysteria.”

## Russia

### Not Purchase

NYT 10/17 ("Mr. Putin’s Gift to Terrorists," 2012, NYTimes Editorial Board,

The official explanation for ending them is based on national pride — the wish to proclaim that Russia can take care of these issues by itself, without American help

### Inevitable- Weapons

Diakov 12 (Anatoli, Center for Arms Control, Energy and Environmental Studies, "Disposition of Excess Russian Weapon HEU and Plutonium," Feb, [www.unidir.org/pdf/ouvrages/pdf-1-92-9045-012-D-en.pdf], jam)

If Russia and the United States each reduced their stocks of deployed nuclear warheads as established by the New START treaty to the level of 1,550, that could free up hundreds of tons of additional material for disposition.

Smith 11 (James F., Communications Director, Belfer Center for Science and International Affairs, Jun

All stocks of nuclear weapons, highly enriched uranium and plutonium must be protected against all plausible terrorist and criminal threats, and the number of locations where these stocks exist must be reduced as much as practicable.

### No Attack

#### Ev only says in vacuum a good terrorist group could achieve it- not indicate of their ability to access because of lack of power- only looks at previous testing

#### No threat of nuclear terrorism – bin Laden documents prove terrorists have no money

John Mueller- Prof poli sci, Ohio State, August 2, 2011, The Truth About al Qaeda, Foreign Affairs, http://www.foreignaffairs.com/articles/68012/john-mueller/the-truth-about-al-qaeda?page=show

The chief lesson of 9/11 should have been that small bands of terrorists, using simple methods, can exploit loopholes in existing security systems. But instead, many preferred to engage in massive extrapolation: If 19 men could hijack four airplanes simultaneously, the thinking went, then surely al Qaeda would soon make an atomic bomb. As a misguided Turkish proverb holds, "If your enemy be an ant, imagine him to be an elephant." The new information unearthed in Osama bin Laden's hideout in Abbottabad, Pakistan, suggests that the United States has been doing so for a full decade. Whatever al Qaeda's threatening rhetoric and occasional nuclear fantasies, its potential as a menace, particularly as an atomic one, has been much inflated. The public has now endured a decade of dire warnings about the imminence of a terrorist atomic attack. In 2004, the former CIA spook Michael Scheuer proclaimed on television's 60 Minutes that it was "probably a near thing," and in 2007, the physicist Richard Garwin assessed the likelihood of a nuclear explosion in an American or a European city by terrorism or other means in the next ten years to be 87 percent. By 2008, Defense Secretary Robert Gates mused that what keeps every senior government leader awake at night is "the thought of a terrorist ending up with a weapon of mass destruction, especially nuclear." Few, it seems, found much solace in the fact that an al Qaeda computer seized in Afghanistan in 2001 indicated that the group's budget for research on weapons of mass destruction (almost all of it focused on primitive chemical weapons work) was some $2,000 to $4,000. In the wake of the killing of Osama bin Laden, officials now have more al Qaeda computers, which reportedly contain a wealth of information about the workings of the organization in the intervening decade. A multi-agency task force has completed its assessment, and according to first reports, it has found that al Qaeda members have primarily been engaged in dodging drone strikes and complaining about how cash-strapped they are. Some reports suggest they've also been looking at quite a bit of pornography. The full story is not out yet, but it seems breathtakingly unlikely that the miserable little group has had the time or inclination, let alone the money, to set up and staff a uranium-seizing operation, as well as a fancy, super-high-tech facility to fabricate a bomb. It is a process that requires trusting corrupted foreign collaborators and other criminals, obtaining and transporting highly guarded material, setting up a machine shop staffed with top scientists and technicians, and rolling the heavy, cumbersome, and untested finished product into position to be detonated by a skilled crew, all the while attracting no attention from outsiders. The documents also reveal that after fleeing Afghanistan, bin Laden maintained what one member of the task force calls an "obsession" with attacking the United States again, even though 9/11 was in many ways a disaster for the group. It led to a worldwide loss of support, a major attack on it and on its Taliban hosts, and a decade of furious and dedicated harassment. And indeed, bin Laden did repeatedly and publicly threaten an attack on the United States. He assured Americans in 2002 that "the youth of Islam are preparing things that will fill your hearts with fear"; and in 2006, he declared that his group had been able "to breach your security measures" and that "operations are under preparation, and you will see them on your own ground once they are finished." Al Qaeda's animated spokesman, Adam Gadahn, proclaimed in 2004 that "the streets of America shall run red with blood" and that "the next wave of attacks may come at any moment." The obsessive desire notwithstanding, such fulminations have clearly lacked substance. Although hundreds of millions of people enter the United States legally every year, and countless others illegally, no true al Qaeda cell has been found in the country since 9/11 and exceedingly few people have been uncovered who even have any sort of "link" to the organization. The closest effort at an al Qaeda operation within the country was a decidedly nonnuclear one by an Afghan-American, Najibullah Zazi, in 2009. Outraged at the U.S.-led war on his home country, Zazi attempted to join the Taliban but was persuaded by al Qaeda operatives in Pakistan to set off some bombs in the United States instead. Under surveillance from the start, he was soon arrested, and, however "radicalized," he has been talking to investigators ever since, turning traitor to his former colleagues. Whatever training Zazi received was inadequate; he repeatedly and desperately sought further instruction from his overseas instructors by phone. At one point, he purchased bomb material with a stolen credit card, guaranteeing that the purchase would attract attention and that security video recordings would be scrutinized. Apparently, his handlers were so strapped that they could not even advance him a bit of cash to purchase some hydrogen peroxide for making a bomb. For al Qaeda, then, the operation was a failure in every way -- except for the ego boost it got by inspiring the usual dire litany about the group's supposedly existential challenge to the United States, to the civilized world, to the modern state system. Indeed, no Muslim extremist has succeeded in detonating even a simple bomb in the United States in the last ten years, and except for the attacks on the London Underground in 2005, neither has any in the United Kingdom. It seems wildly unlikely that al Qaeda is remotely ready to go nuclear. Outside of war zones, the amount of killing carried out by al Qaeda and al Qaeda linkees, maybes, and wannabes throughout the entire world since 9/11 stands at perhaps a few hundred per year. That's a few hundred too many, of course, but it scarcely presents an existential, or elephantine, threat. And the likelihood that an American will be killed by a terrorist of any ilk stands at one in 3.5 million per year, even with 9/11 included. That probability will remain unchanged unless terrorists are able to increase their capabilities massively -- and obtaining nuclear weapons would allow them to do so. Although al Qaeda may have dreamed from time to time about getting such weapons, no other terrorist group has even gone so far as to indulge in such dreams, with the exception of the Japanese cult Aum Shinrikyo, which leased the mineral rights to an Australian sheep ranch that sat on uranium deposits, purchased some semi-relevant equipment, and tried to buy a finished bomb from the Russians. That experience, however, cannot be very encouraging to the would-be atomic terrorist. Even though it was flush with funds and undistracted by drone attacks (or even by much surveillance), Aum Shinrikyo abandoned its atomic efforts in frustration very early on. It then moved to biological weapons, another complete failure that inspired its leader to suggest that fears expressed in the United States of a biological attack were actually a ruse to tempt terrorist groups to pursue the weapons. The group did finally manage to release some sarin gas in a Tokyo subway that killed 13 and led to the group's terminal shutdown, as well as to 16 years (and counting) of pronouncements that WMD terrorism is the wave of the future. No elephants there, either.