### 1AC Afghanistan adv

#### Four reasons grid collapse is inevitable

Overload

Weather

Cyber attacks

Supply disruption

DSB Taskforce 2008 (Defense Science Board Task Force, Federal Advisory Committee established to provide independent advice to the Secretary of Defense, Tom Morehouse, editor, February 2008, Office of the Under Secretary of Defense For Acquisition, Technology, and Logistics, http://www.acq.osd.mil/dsb/reports/ADA477619.pdf)

The first risk is from overload. As wires become overloaded, they heat up and sag, making them vulnerable to entanglement with trees and other objects. This happened near Cleveland, Ohio on August 14, 2003. According to the U.S.-Canada Power System Outage Task Force, high demand caused a high-voltage line to come in contact with overgrown trees. The resulting cascade of failures plunged many of the 50 million people in the Northeast U.S. and Canada living in an area covering 9,300 square miles into darkness. It shut down more than 500 generating units at 265 power plants, including 22 nuclear plants.29¶ A second risk comes from natural disasters, such as hurricanes, tornadoes, electrical storms or other extreme weather events. The consequences could be very much as described above, but with the added risk of physical damage to the infrastructure. Favorable commentary about the performance of the grid following the August 2003 outage focused on the fact that restoration occurred fairly quickly. Within a few days power was restored virtually everywhere, with much of the area back up within a few hours. This was largely because safety features built into the grid successfully prevented damage to critical equipment such as generators, breakers and transformers. 30 However, the Task Force is concerned that such an extensive outage could be caused by such a commonplace event – a single line contacting a tree. This inevitably raises the next issue below: what the result might have been had there been physical damage to infrastructure, such as from a deliberate attack by knowledgeable adversaries?¶ A third risk comes from sabotage or terrorist activity, whether local, trans-national, or state-sponsored, and including both conventional and nuclear attack. Nuclear attack could take place either directly or through the generation of a high altitude electromagnetic pulse (EMP). The grid is a relatively easy target for a terrorist. It is brittle, increasingly centralized, capacity-strained, and largely unprotected from physical attack, with little stockpiling of critical hardware. Although the system is designed to survive single points of failure, increasing demand on the system and increasing network constraints make multiple points of failure more likely. These are difficult to anticipate and more likely to result in cascading outages and catastrophic outages that cover large areas for long periods of time. Network Single Points of Failure (NSPF) are abundant. High voltage transformers, breakers, and other long-lead time items are particularly critical system elements.31 They can be easily targeted and destroyed. Grid sections could be taken down for months even if replacement transformers and breakers could be found; or for years if certain components need to be newly manufactured and transported. There are only limited backups located around the country—generally co-located with operating equipment. For some of the largest equipment, there is no domestic supply and only limited overseas production capacity which is fully booked years ahead. 32 For example, 765 kV transformers are manufactured only by one company in Canada. Armed with the right knowledge, a small number of people could shut down electricity over significant areas for an extended period of time, including power to critical DoD missions. The grid is not designed to withstand a coordinated multi-pronged or wide-area attack.33 The Task Force noted that attacks on the grid are one of the most common and effective tactics of insurgents in Iraq, and are increasingly seen in Afghanistan.34¶ In addition to physical attacks on the grid, there is the potential for cyber attacks. U.S. grid control systems are continuously probed electronically, and there have been numerous attempted attacks on the Supervisory Control and Data Acquisition (SCADA) systems that operate the grid. None have yet resulted in major problems in the U.S., but the potential exists for major outages in the same way successful hackers can disrupt computer networks.35 Further details regarding the potential for deliberate attacks to the grid and their potential consequences are contained in a classified annex to this report.¶ A fourth risk comes from interruptions in supplies to generating plants, which can be caused by natural events, infrastructure failures, attack or even market forces. This occurred in California during 2000 and 2001 when supplies of natural gas were interrupted and forced a reduction in electricity generation.36 Approximately 20% of U.S. electricity is generated by natural gas and market prices have swung wildly over the past several years.37 Approximately 52% of U.S. electricity is generated by coal and transportation routes that move coal from mines to generating plants are sometimes remote and lacking in alternatives. Critical rail lines or bridges could be taken out by determined saboteurs. For example, in May 2005, 43 rail cars came off the tracks. The disruption to coal deliveries caused prices to spike, and raised electricity prices by 6% nationally, according to the Bureau of Labor Statistics. The 100 mile length of rail line through Wyoming that carries the output of the Western coal belt to power plants is the most heavily traveled in the nation.38 So in addition to risks from grid outage, there are risks to the supply chain that enables the grid to work—not least from electricity supply failures themselves, which could disable the pipelines and controls used by other forms of energy, notably oil and gas.

#### Collapses drone operations in Afghanistan

Aimone 2012 (Michael Aimone, Director¶ Business Enterprise Integration¶ Office of the Deputy Under Secretary of Defense, September 12, 2012, Testimony Before the House Committee on Homeland Security¶ Subcommittee on Cybersecurity, Infrastructure Protection and Security Technologies, http://homeland.house.gov/sites/homeland.house.gov/files/Testimony%20-%20Aimone.pdf)

DoD’s facility energy strategy is also focused heavily on grid security in the name of mission assurance. Although the Department’s fixed installations traditionally served largely as a platform for training and deployment of forces, in recent years they have begun to provide direct support for combat operations, such as unmanned aerial vehicles (UAVs) flown in Afghanistan from fixed installations here in the United States. Our fixed installations also serve as staging platforms for humanitarian and homeland defense missions. These installations are largely dependent on a commercial power grid that is vulnerable to disruption due to aging infrastructure, weather-related events, and potential kinetic, cyber attack. In 2008, the Defense Science Board warned that DoD’s reliance on a fragile power grid to deliver electricity to its bases places critical missions at risk.1

#### Drones key to contain insurgents

Dale 2011 (Catherine Dale, specialist in international security at the Congressional Research Service, March 9, 2011, “War in Afghanistan: Strategy, Operations, and Issues for Congress,” http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA542626)

By 2008, President Bush had reportedly authorized U.S. military cross-border operations into Pakistan, by ground or Predator unmanned aerial vehicles (UAV).210 Neither the Central Intelligence Agency nor the U.S. military officially confirms the use of the drone strikes.¶ To be clear, NATO’s policy for ISAF does not include cross-border strikes. Asked in July 2008 whether the Alliance would go after militants in Pakistan, Secretary-General Jaap de Hoop Scheffer said, “My answer is an unqualified ‘no.’ We have a United Nations mandate for Afghanistan and that’s it. If NATO forces are shot at from the other side of the border, there is¶ always the right to self-defense but you will not see NATO forces crossing into Pakistani territory.”211¶ According to publicly available reporting, based primarily on accounts from people on the ground, a major early focus of the drone strikes was the South Waziristan agency in the FATA, long the home base for the TTP, the Pakistani Taliban umbrella organization; a drone strike killed TTP leader Baitullah Mahsud in August 2009. Subsequently, the focus of the drone strikes shifted to the North Waziristan agency, understood to be the stronghold of the Haqqani network, one of the major insurgencies active in Afghanistan. Observers have suggested that under the Obama Administration, the frequency of the drone attacks has increased markedly.212¶ Senior ISAF officials have noted that cross-border attacks have yielded big operational and tactical benefits for the campaign in Afghanistan—by causing the insurgent networks to feel disconnected, and by prompting local residents in Pakistan to want al Qaeda and other outsiders to leave their communities.213

#### Even after 2014 drones key to contain Taliban and prevent Afghan collapse

Singh 10/3 (Colonel Ajay Singh, October 3, 2012, “Afghanistan 2014 and Beyond,” South Asia Defence and Strategic Review, http://www.defstrat.com/exec/frmArticleDetails.aspx?DID=368)

When President Obama announced the termination of military operations in Afghanistan post 2014, he followed it up by saying, “In the pre-dawn darkness of Afghanistan we can see the light of a new day”. But then, perhaps he was just using his superb powers of oratory and his felicity with the language to justify the termination of US military operations in Afghanistan from December 2014. There is a grey darkness in Afghanistan now a prolonged dark interspersed with flashes of bombings and attacks. Yet, is this period - an uncertain, tentative period before the US completes its withdrawal, the dark of a pre-dawn era or the even more chilling darkness of another long, desolate night.¶ President Obama does seem to put timelines on his operations and so far most of these timelines have been adhered to. In July, at the NATO Chicago conference he announced that the US and NATO will end all combat operations by December 2013 and withdraw all troops less those engaged in essential security and advisory roles by 31 December 2014. This effectively draws the curtain on America's longest and most expensive war, one which has cost over $ 3 Trillion and claimed over 3600 lives. The fatigue of 12 years of inconclusive conflict is telling on the US and its allies. No President, especially in an election year, wants to face a mandate which is deeply against an unpopular war. Perhaps the timing of President Obama's withdrawal announcement has a lot to do with the US elections in November 2014. ¶ Yet it is not a complete withdrawal as such. The US will leave behind an estimated 20,000-30,000 troops in training and advisory duties and still retain some of its major bases to assist the Afghan National Security Force in counter terrorist actions. Bagram and Shamsi Air Fields will also be retained to launch continual drone attacks in Afghanistan and Pakistan. But will it suffice to ensure the stability of the war-torn nation and prevent it from slipping into chaos. Many fear a repeat of the post Soviet withdrawal period a vacuum of power that plunged the nation in to a civil war and brought the Taliban into power. The scenario in Afghanistan, post 2014, may not be so bleak, but the US withdrawal will definitely cause a power shift that will impact the entire region.¶ For one, the US aims in Afghanistan are not really completed. When it rushed into Afghanistan to extract retribution for the 9/11attacks, the immediate aim was the destruction of Al-Qaeda and its Taliban allies. Today it can claim to have virtually removed Al-Qaeda from Afghanistan. Osama Bin Laden has been spectacularly eliminated. Virtually the entire leadership has been wiped out in a series of drone attacks. Only the spiritual head, Al Zawahiri remains. Many of their cadres have shifted base towards Somalia and Yemen. Yet if Al Qaeda has been contained to a great extent, the Taliban is as active if not much more, as ever. The US policy of focusing exclusively on Al-Qaeda let the Taliban regroup after its initial reverses. Today, the major militant presence in Afghanistan is not of Al Qaeda, but the Taliban, which is gearing up for the post US withdrawal scenario. Gradually they have taken over the areas of Helmand, Ghazni and Anbar which have been vacated by NATO troops. As they consolidate, the fear is that, post 2014, they will simply step back into Afghanistan and regain power in the same manner that they did in the wake of the Soviet withdrawal.¶ The signs do seem to indicate that the Taliban are gearing up for a sustained offensive that will set the grounds for them to eventually come into power after the US withdrawal. There has been an intensification of attacks significantly almost all by the Taliban and none by Al Qaeda - in the period following the announcement of the withdrawal. There have been 34 major attacks with the deadliest being on the eve of the Id festival which killed over 50 Shai worshippers in their shrines. This is a grim reminder of the Taliban's propensity to target the minority Shia community, especially the Hazaras. The increase in their attacks also corresponds to the reduction in operations launched by NATO forces. As part of the pre-withdrawal plans, most operations, especially night operations are now conducted by the Afghan National Army and local police, with US forces in a advisory or supporting role. The linchpin of the US policy post 2014 is to develop the Afghan National Security Force to be strong enough to ensure the security of their own country. But at the moment, in spite of the huge investments in training and equipping the Afghan army, it does not seem to be up to the task. It was estimated that an Afghan Security Force of 3,52,000 would be required to ensure continual security. This figure was pruned down to 2,30,000 because of the exorbitant costs of $ 6 billion per year. (With the new figure, the price tag will drop to $ 4 billion per year). This parsimony may be a mistake in the long term. Even with 1,30,000 US troops already in the country, the Afghan Security Forces have been unable to curb the Taliban. After the withdrawal, even with a residual force of 20-30000 US troops, will the ANSF be able to resist a full-fledged Taliban offensive to take over their country.¶ There are other ominous signs. Taliban infiltration in the Security force is fairly rampant. There has been a series of attacks NATO troops from their local allies in the Afghan Security force. These “Green on Blue” attacks have claimed 45 NATO soldiers and wounded 69 others in this calendar year itself. Most of these attacks have been attributed to Taliban infiltration in the security forces. In fact, just last week NATO suspended training of the Afghan Local Police after a series of 12 insider attacks in the month of August alone. All this is not a happy augury for the capabilities of the Afghan Security Force to hold their country together post 2015, though in the long run, Afghanistan's security must be ensured by Afghans themselves. ¶ The US is taking pains to ensure that they still have a continual stake in Afghanistan's security so that it is not simply abandoned post 2014. The US signed a Strategic Partnership Agreement with Kabul that is valid for a decade after 2014 and assures it of continual US support. Afghanistan was also granted Major Non NATO Ally status in July thus giving it entry into a select club that includes Israel, Japan, Pakistan and South Korea. This will provide Afghanistan special privileges such as access to military equipment, training facilities and special grants. Surveillance and fire power capabilities will be provided. Drone and air attacks on militant hide outs on both sides of the Durand Line will continue. But in spite of the supporting role that the US will still play, will Anti-Taliban operations have the same momentum- especially when the operations will now be conducted by the Pushtoon dominated military against their own tribal brethren.

#### Afghanistan failure causes WWIII great power war

Fox 2011 (Robert Fox, international reporter and associate at the Corriere della Sera in Milan, July 12, 2011, “Afghanistan: If we’re not careful, WW3 is imminent,” The Week, http://goo.gl/PlUTV)

There are growing fears that a speedy withdrawal of western troops from Afghanistan, accompanied by a fudged deal to bring the Taliban back into power in some sort of coalition, could trigger another dreadful round of civil war. And, given the meddling already undertaken by neighbours such as Pakistan and Iran, this civil war could quickly become a regional war. This in turn could morph into a contest of global significance between India and China and their proxies and allies. In short, welcome to the Third World War in the 21st century. There is a list of concerns which suggest this might happen. First there is the endemic corruption in Kabul under President Karzai. This is about to be highlighted by the IMF's attempt to sort out the crash of the Kabul Bank, with a loss of some $700 million. The problem is not just the Kabul bank, but banks in general across Afghanistan, which the kleptocrats of Kabul seem to regard as their personal piggy banks. Then there is Karzai himself, who seems to be trying to bend or break the constitution so he can run for a third term in two years' time – banned under the present rules. The armed services and police are also a concern. Though recruiting and training have made huge strides, with more than 250,000 under arms now, there are worries about the continuing imbalance between the different ethnic groups, with the Tajiks and Hazara over-represented, and the recruiting of southern Pashtuns still limping. The danger is that the Afghan army will split on ethnic lines when Afghanistan gains full control of its security in 2015. In a civil war, the southern Pashtuns would turn to the Pakistan army and ISI intelligence service, who are more deeply involved in backing Islamist militants than previously thought, according to some devastating reports for the New York Times by Carlotta Gall.

#### Drones crush terrorists and solve militant takeover in Pakistan

**Nadim 2012** (Hussain Nadim, visiting scholar at the Woodrow Wilson Center, August 8, 2012, "How Drones Changed the Game in Pakistan," National Interest, 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.

#### Nothing else stopping Pakistan collapse loose nukes

Thiessen 2012 (Marc A. Thiessen, AEI fellow and member of the White House senior staff under President George W. Bush, March 19, 2012, “Five disasters we’ll face if U.S. retreats from Afghanistan,” Washington Post, http://www.washingtonpost.com/opinions/five-disasters-well-face-if-us-retreats-from-afghanistan/2012/03/19/gIQA04zCNS\_story\_1.html)

1. The drone war against al-Qaeda in Pakistan would likely cease. Eighty-three percent of Americans support targeted drone strikes against al-Qaeda leaders hiding in the tribal regions of Pakistan. Those strikes are dependent on forward bases in Afghanistan near the Pakistani border. The U.S. no longer operates drones from inside Pakistan. We cannot effectively conduct targeted strikes from Navy ships because Pakistan’s tribal regions are more than a thousand of miles from the sea. Bagram airbase near Kabul is also too far away for anything other than dropping bombs from F-15s. spotiSo if we want to continue the drone war against al-Qaeda, we must have a U.S. military presence not just in Afghanistan but in the Pashtun heartland — and we can’t have that presence if the Pashtun heartland is on fire. The Afghan government is not likely to allow us to keep bases in this area if we were doing nothing to stabilize the country. And if the region falls to the Taliban, we will lose access to these areas completely. Loss of these bases would also mean the loss of the intelligence networks on both sides of the border enabled by the U.S. military presence — and thus much of the targeting information we depend on. As a result, direct strikes in Pakistan could effectively cease, the pressure on the terrorists would be lifted, and al-Qaeda would be free to reconstitute.¶ 2. The risk that Pakistan (and its nuclear arsenal) falls to the extremists grows. With the pressure from the United States lifted, al-Qaeda and the Pakistani Taliban would be free to ramp up their efforts to destabilize Pakistan. In a worst-case scenario, they could topple the government and take control of Pakistan’s nuclear arsenal. In a “best-case” scenario, those within the Pakistani government who supported cooperating with the United States will be weakened, while those who have long argued for supporting the Islamists and terrorists against the United States will be strengthened. Either way, Pakistan becomes a facilitator of terror.

#### Pakistani militants cause Indo-Pak war

Vira and Cordesman 2011 (Varun Vira and Anthony H. Cordesman, “Pakistan: Violence vs. Stability,” CSIS, http://goo.gl/ZyS4q)

These conflicts have been augmented by violence and tensions inside the rest of Pakistan. In south Punjab, a historical hotbed of militancy, various groups once firmly tethered to state policy have begun to splinter and migrate to the tribal areas. These groups have considerable experience in combat and knowledge of the weapons and technologies needed for asymmetric warfare. They have joined tribal militant groups, and assisted them in bringing terrorist violence into the previously insulated urban centers of the Punjab and the Sindh. In Karachi, a key economic engine of Pakistan, ethno-sectarian violence has risen to new levels with the real danger of a slide back into the communal violence of the early 1990s. Such a reversal would be catastrophic for stability, exacerbating already chronic economic woes, whilst providing fodder for the sectarian and ethnic drivers of conflict in Pakistan. In Baluchistan, a fifth separatist insurgency has become more active since 2004, and is closely linked and influenced by regional geopolitics. The Baloch insurgency is distinct from other conflicts, primarily in that Sunni-Deobandi philosophies play little role, but it nonetheless benefits from many of the same drivers, including widespread impoverishment, chronic underdevelopment and alienation from mainstream Pakistan. The Challenges of External Relations Pakistan‟s focus on the challenge from India affects virtually every aspect of its external relations. This plays out in Afghanistan in the form of a competition for influence over the Afghan government where Pakistan attempts to use its ties to the Afghan Taliban, Haqqani network, and other movements to ensure its influence over the future of Afghanistan and to limit any threat of Pashtun independence movements. The end result is a fundamentally different perception of Pakistan‟s national interest from the US focus on Afghan security and stability. It is the reality behind the rhetoric of “ally” and “strategic partner” that has led to constant tension with the US. Cross-border violence into Afghanistan is a major irritant, and has resulted in deteriorating US-Pakistani relations. Similarly, the Indo-Pakistani border is one of the most tense on the planet, and secured on both sides by nuclear weapons. Cross-border violence into India can greatly escalate the prospects of large-scale war. Many Kashmiri militant groups have splintered, as in south Punjab, and the growing risk of militant proxies operating autonomously cannot be discounted, particularly to divert Pakistani military attention away from the tribal areas.

#### Guaranteed escalation: Miscalc, flight times, devolved authority, no stable deterrent

Yusuf 2011 (Moeed Yusuf, South Asia adviser at the United States Institute of Peace Center in the Center for Conflict Analysis and Prevention, January 25, 2011, “Stability in the Nuclear Context: Making South Asians Safe,” Jinnah Institute, http://goo.gl/FwYXH)

Crises between Pakistan and India represent a quantum leap in terms of the induction of instability inducing factors relevant to the nuclear calculus. To begin with, every crisis carries with it a realistic possibility of uncontrolled escalation leading to a deliberate or inadvertent nuclear strike. Not to mention, in the South Asian context, escalation represents uncharted territory, a dangerous proposition given that no escalation control mechanisms have been institutionalized. Yet, crises remain highly likely for more than one reason. There are outstanding contentious issues between the two sides which keep forcing them to the verge of a diplomatic breakdown. Moreover, both sides seem to believe that limited aggression under the nuclear umbrella is permissible and will not warrant a nuclear response. India’s limited war doctrine, Cold Start, formalizes this belief while Pakistan’s propensity to employ non-state actors on Indian soil in the past underscores its traditional propensity for similar risk taking. 12 In the absence of clearly defined nuclear red lines, it is very difficult to determine just what constitutes as ‘limited aggression’ for either side. A number of simulations the author has been part of point to wide divergence in how the two sides view the situation. Finally, nonstate actors are no longer playing to the tune of the Pakistani state and can engineer a Pakistan-India crisis on their own, Mumbai being a pertinent example. Most analysts suggest that a repeat of such an episode will see some form of Indian aggression followed by a Pakistani counterresponse; 13 what follows is anybody’s guess but it may well entail further escalation at a swift pace during which either side may cross the other’s nuclear red lines. In an escalated conflict, survivability of Indian and Pakistani nuclear arsenals shall remain intact and pre-emption against the nuclear forces would still be a far cry, even from the stronger party, India. Given Pakistan’s mobile delivery systems and a significant number of warheads, it would be impossible for New Delhi to guarantee that the entire arsenal will be successfully neutralized in a pre-emptive strike. This would hold even if Pakistan deployed its weapon systems during the course of an escalation. That said, there are two potential dangers in crisis situations. First, Pakistan and India use dualpurpose missiles and air craft for delivery. In the absence of advanced early warning capabilities, an incoming aircraft or missile could well be perceived as an attempt at pre-emption. The defender may panic and consider launching its own strike before it is too late. Second, it is worth pointing out the vulnerability of Pakistan’s nuclear decision making chain of command. Pakistan’s entire government and military top brass sit within 50 miles in Islamabad/Rawal Pindi and could potentially be neutralized in a pre-emptive strike that seeks to decapitate the country’s nerve center. For those who see this as rather farfetched – the author included – the concern is not as much that such an Indian strike would materialize but that Pakistani decision makers would have considered this possibility in their own contingency planning and taken precautionary measures. In the absence of a bilateral agreement that outlaws pre-emption of the nuclear chain of command, Pakistan may consider dispersing its leadership geographically or even devolving authority of launch to a lower level ex ante. A dispersed NCA amidst the fog of war would find it very difficult to make an informed decision while devolved authority would add to the risk of a premature or miscalculated launch. The challenge of preventing unauthorized or inadvertent launches increases multifold and crystallizes the kind of dangers India and Pakistan may end up subjecting their populations to in crisis situations. Their command and control structures may be robust enough to hold in peace time but the doctrinal and geographical asymmetries transform the equation under the stress of crises. For one, even in the absence of a sea-based capability which has to be constantly deployed for full effect, both sides would inevitably contemplate mating and subsequently deploying their ground and air based assets as a crisis escalates. This implies transportation, wide dispersal, ground preparations which may be misconstrued as an imminent attack by the adversary, and even predelegation of authority to launch. Pakistan, espousing ‘First Use’ and more vulnerable to total annihilation, will be more susceptible to these pressures. 14 In any case, all this adds significantly to the demands on the command and control structure: it necessitates safe transportation in an accident-prone, hot and dry South Asian climate, robust and authenticated communication systems and fool proof, redundant launch protocols under stressful situations. It remains unclear how much confidence the two sides have in their respective mechanisms but the very fact that they have never been tested in real life conditions make malfunctions quite likely if an escalated conflict is experienced. The possibility of a miscalculation in the South Asian case is also substantial given the geographical contiguity between Pakistan and India. The Cold War rivals had the luxury of sitting thousands of miles away and factoring in a decision time of over half an hour in any eventuality. In South Asia, the flight times for missiles between major urban cities are 5-15 minutes. In essence, there is virtually no time for informed decision making; the possibility of making overly conservative judgments about the other side’s intentions during a crisis, and subsequently of premature decisions, is therefore much greater than during the Cold War. This is especially true given that decision makers on both sides already suffer from acute cognitive dissonance about the other. Interestingly enough, even the usually cited remedy, an advanced early warning capability, may not deliver in South Asia; Pakistan and India are geographically too close for the technology to be able to work meaningfully. 15

#### Independently grid failure destroys reachback support

Robyn 2010 (Dr. Dorothy Robyn, Deputy Under Secretary of Defense for Installations and Environment, January 27, 2010, testimony before the Senate Homeland Security and Governmental Affairs Committee Subcommittee on Federal Financial Management, Government Information, Federal Services and International Security, online)

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 United States, 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.

#### Reachback key to 4GW and counterinsurgency effectiveness

Radzikowski 2008 (Phillip Radzikowski, Captain in the United States Army currently working at the Pentagon, previously served with the 4th Stryker Brigade Combat Team, 2nd Infantry Division, as the brigade assistant S-3, then as a liaison officer with the COIC for 14 months during the brigade’s deployment to Iraq, 2008, “‘Reach-Back’—A New Approach To Asymmetrical Warfare Intelligence,” Association of the United States Army, http://www.ausa.org/publications/armymagazine/archive/2008/12/Documents/FC\_Radzikowski\_1208.pdf)

Reach-back support is a relatively new concept. It provides operational warfighting units—battalions and brigades—the opportunity to reach outside of their traditional avenues of information flow and use national intelligence community assets to gather information to fill “gaps” in tactical intelligence.¶ Traditionally, company commanders develop the ground situation through patrol reports, atmospherics and general situational awareness. Their reporting tells the true story on the ground. The battalion intelligence officer and his shop process, track and attempt to identify patterns of insurgent networks and groups that will help drive targeting operations. Ultimately, targeting is refined at the brigade and battalion levels and then executed at the company level. The brigade MICO expands upon the battalion S-2’s assessments and evaluations and creates broader network analysis of insurgent group development. The MICO has the added responsibility of incorporating the broader intelligence community’s assets into the fight. Traditionally, this works. The problem is that, traditionally, the U.S. Army has not been fighting an insurgency.¶ During combat with an insurgency, the battlefield transforms at an inconceivable speed. Enemy tactics, techniques and procedures (TTPs) evolve, networks move and key individuals change rapidly. For companies, battalions and brigades to keep up and stay ahead of the insurgent execution curve requires the support of an intelligence network that can gather and leverage national information assets immediately and effectively. Reach-back support is the answer.¶ Reach-back support is the ability for forward-deployed units (battalions and brigades) to refer specific intelligence-oriented questions to continen- tal United States-based agencies for support. The U.S. government’s intelligence community has an enormous amount of collected information, including relevant warfighting information, which is compartmentalized for added security. This means that if an individual performing an intelligence function doesn’t know about the avail- ability of certain information, then he or she cannot use it—that poten- tially valuable information is rendered useless.¶ With reach-back support, when members of a tactical unit identify a gap in their own intelligence, then that gap becomes a question. The unit then poses the question to a reach-back sup- port agency that will have a team of in- telligence analysts address that specific problem and produce a “product” that addresses that specific gap.

#### Key to Afghanistan and all asymmetric conflicts- We control impact uniqueness these are the wars of the future

Barno 2011 (David Barno, Ret. Lt. Gen., senior adviser and senior fellow at the Center for a New American Security, former U.S. commander in Afghanistan, March 22, 2011 “Military Power in a Disorderly World,” World Politics Review, http://www.worldpoliticsreview.com/articles/8259/military-power-in-a-disorderly-world)

The opening acts of the 21st century have fundamentally challenged long-held notions of military power. The past decade has unveiled not only the disruptive power of terrorist groups with global reach, but also the ability of low-budget insurgent groups to directly confront the best military forces of the West -- with surprising success. Moreover, recent revolutionary events across the Arab world have demonstrated the limits of military power when facing mass popular uprisings. Disorder, chaos and violent extremism seem on course to replace state-on-state violence as the most common forms of conflict in the new century. Given this new security environment, the U.S. military must begin to play a larger role in conflict prevention in order to fully realize its value, commensurate with its cost, in this new disorderly world. ¶ The attacks of Sept. 11, 2001 -- launched not with tanks, warplanes or intercontinental missiles, but with commercial airliners -- were the most deadly assaults on U.S. soil since the American Civil War. Unconventional wars in Afghanistan and Iraq have also rattled the conventions of military thought, as insurgents equipped with inexpensive weaponry have inflicted prolonged attrition on U.S. forces. The U.S. military has spent billions of dollars defending against these new, low-cost threats, but the West and its military thinkers are still grappling with the full security implications of these dramatic upheavals in traditional military power balances. The era of asymmetric warfare has arrived with a vengeance. ¶ Recent revolutionary events in the Arab world -- starting in Tunisia and rapidly spreading to Egypt, Libya, Yemen and Bahrain -- have further highlighted today's shifting balance of power. While the outcome of these upheavals is still unclear, they reflect a new sort of asymmetrical power wielded by popular movements and expressed through mass street demonstrations. These spontaneous movements -- organized and enabled by modern technologies such as cellphones, Twitter and Facebook -- have directly challenged the "hard power" of state militaries, albeit with mixed results to date. Yet at the same time, the West's hard-power reponse to the Libyan regime's harsh backlash against its people has further demonstrated that conventional military power remains a powerful tool -- in this case employed to enforce the will of the broader international community as expressed by U.N. resolutions. ¶ Another version of this asymmetric power shift has played out against Western forces in the wars for Afghanistan and Iraq. Despite successful high-tech U.S. military campaigns at the outset of each conflict, the enemy quickly adapted with inexpensive forms of asymmetry, in the shape of attacks by car bombs, suicide vests and IEDs, and with clashes often captured and disseminated via cellphone videos. The cost to the insurgents of these unconventional weapons is minimal, but the U.S. defensive response to protect its army is staggering. The multibillion-dollar fleet of heavily protected MRAP vehicles designed to protect U.S. soldiers against IEDs is just one example. This reflects in part an insurgent strategy of "cost imposition," whereby the enemy attempts to drive the costs of the war in lives and fortune to a point where it no longer makes strategic sense for the U.S. to pursue its aims. ¶ The evolving nature of global threats echoes the tactical asymmetry found on the ground in Afghanistan and Iraq. Where the 19th and 20th centuries were dominated by a Westphalian order of nation-states, nonstate actors have moved to center stage in today's global order. This is a "flat world" of multinational companies, interwoven crime syndicates, global special interest groups, Internet-fueled extremist ideologies and terrorist networks. In many ways, the comfortable order and rule of law represented by the nation-states seated at the U.N. is fading, overtaken by a complex mix of other competitors for power. Of even greater concern, the destructive power accessible to even tiny groups is skyrocketing, rendering both deterrence and containment of fringe actors exceedingly difficult. ¶ The role of U.S. military forces in this new era of global disorder requires a careful assessment. The U.S. Department of Defense has traditionally analyzed foreign military capabilities and assigned priorities based upon their potential threat to U.S. interests. In today's world, a threat-calculus based upon conventional military capabilities makes less sense, as does the impetus to simply build a U.S. military to confront these nation-state threats. In a disorderly world, terrorist groups, transnational criminals or state failure may generate a serious threat to U.S. vital interests as readily as a cross-border invasion. In this environment, a U.S. military too deeply invested in conventional military capabilities may be poorly positioned for other strategic challenges facing the United States. But if it seems obvious that the next U.S. military must be able to more than just fight or deter other armies, navies and air forces, exactly what else it should be doing is less clear.¶ In many ways, the current "supply of security capital" by the United States is woefully out of balance with the "demand signal" driven by threats in this new disorderly world. A U.S. Foreign Service with fewer than 8,000 diplomats to cover the globe contrasts with a U.S. Marine Corps of 200,000 leathernecks. A foreign aid and development budget of less than $60 billion competes with a base defense budget that exceeds $550 billion a year. But the bureaucratic realities of Washington and the U.S. Congress give scant hope that any major realignments between U.S. government departments will occur. This is a fundamental dose of reality: Even in an era of fiscal austerity, Defense will continue to have a disproportionate share of U.S. government discretionary spending. This recognition should drive new thinking on maximizing those assets.¶ One outcome should be clear: The U.S. military must begin to play a larger role in global conflict prevention in this new disorderly world. Military forces based largely in the United States waiting for a war to break out are simply an unaffordable resource drain in a financial environment where the annual interest payments on the nation's debt will exceed its $550 billion defense budget by the end of this decade. The U.S. military is no longer a sound investment if it only defends and deters -- it must now also actively help prevent conflicts and stabilize key regions of the world where instability can threaten vital U.S. interests. All three missions -- defend, deter, prevent -- are important, and the next U.S. military should be organized, trained and equipped to actively engage in each. ¶ Making this change will require a strategic reset in both U.S. military and diplomatic thinking. Fortunately, the nation-building and counterinsurgency experiences of the past 10 years have prepared the military well for this adjustment. Building on this experience makes sense. This new task of "selective stabilization" can better align the military with U.S. diplomatic missions abroad in at-risk areas and leverage a broader array of U.S. power. Yet this logic will be strongly opposed by those worried about a further "militarization of foreign policy" -- while failing to recognize that the diplomat's traditional remit of "represent, report and negotiate" is shrinking in today's disorderly world. Fewer regions will demand these traditional diplomatic talents alone, and many more will require new skills in integrating U.S. hard and soft power in potential conflict zones. ¶ Demographic and natural resource trends signal that violent upheaval and the threat of instability will menace ever greater parts of the world, especially in the Middle East, Africa and Central and South Asia. U.S. vital interests in these regions are less threatened by interstate war than by the risks of internal extremism, instability and terrorism. Stabilizing the most important of these regions is an essential new task, and one that will require the combined talents of State and Defense.

#### Most likely nuclear escalation

Richards 2005 (Dr. Chet Richards, J. Addams & Partners July 12, 2005, “Dear Mr. & Ms. 1RP: Welcome to the 21st Century” http://www.zmetro.com/pdf/2005/07/welcome\_21st\_century\_v4.pdf)

Beginning with Mao Tse-Tung, and continuing to the present day, insurgency and other forms of non-state warfare have become more potent and much more dangerous in at least two ways: Groups other than states – that is, multinational organizations ranging from alQa’ida to the narcotrafficking cartels – are beginning to acquire high levels of sophistication in organization and in the information technologies that allow them to plan and conduct operations while widely dispersed.4 These same groups increasingly have the financial wherewithal to acquire virtually any type of weapon, from small arms to chemical and biological to nuclear, that they need to carry out operations. The only exceptions are conventional weapons such as tanks, combat aircraft, and fighting ships that require large facilities to support them, but are primarily of use only against other military forces armed with the same types of weapons. They are using their new capabilities not only to fight local governments, as was the case with traditional insurgencies, but to attack distant superpowers as well. Because they can’t field sizable amounts of conventional military hardware, fourth generation (4GW) forces will never try to achieve victory by defeating the military forces of a state in stand-up battles. Instead, they will try to convince their state opponent that it is simply not worth it to continue the fight. Successful 4GWcampaigns in modern times would include those against the French in Algeria, the US in Vietnam and the Soviet Union in Afghanistan, where the insurgents never defeated the foreign armies in any major battle, but eventually persuaded the governments back home to withdraw them. In a well run 4GW campaign, everything the 4GW forces do – including fighting and usually losing the occasional major battle – will support this goal. Persuading governments to withdraw forces, rather than defeating them on the battlefield, is an “information age” goal.6 To achieve the necessary level of persuasion, practitioners of 4GWwill use every information tool they can find to spread their messages to the enemy population and decision makers: Our cause is just and no threat to you There’s nothing here worth your effort and sacrifice Your troops are becoming brutal and your tactics ineffective If you keep it up, you’re going to bleed for a very long time So why not just leave now? As we enter the 21st Century, 4GWorganizations are becoming adept at spreading such messages through new channels, such as global news services (CNN, Al Jazeerah) and of course, web sites, blogs, and mass e-mailings. What you may not be aware of is that 4GWorganizations are also using the latest information tools to communicate with each other and to share information, particularly about what is and is not working (what the military calls “lessons learned.”)7Messages may be encrypted, or sent using code phrases, or even hidden in web site images, a practice called steganography. As with so many information age techniques, instructions for encryption and steganography are floating all over the Internet. Information age techniques are ideal for loose networks of highly motivated individuals, which is a typical form of organization for 4GW groups. Modern information warfare places a higher premium on creativity and innovation than it does on things 4GW organizations typically don’t have, like massive forces, volumes of regulations, and expensive hardware.8 By emphasizing speed and innovation, 4GWgroups can often invent new techniques faster than more structured and bureaucratic organizations such as the Pentagon.9 First responder organizations themselves may be targets of information warfare operations. The information systems of 1RP organizations, including operational systems as well as payroll and administrative, might make attractive targets in coordination with a physical attack. This is a real threat: Many members of al-Qa’ida and affiliated groups are from the educated classes in their countries, were technically trained (Osama bin Laden is a civil engineer), studied and lived in the West, and are capable of conceiving and managing such attacks. There are other advantages to the non-state player from operating in a loose social network. Obviously a social network is harder to find than an organization that requires a fixed infrastructure and wears uniforms. But perhaps most significant in wars of the weak against the strong, networks are highly resilient, so killing their leaders and destroying portions of the network can leave the rest to regenerate under new leadership in different locations.1112 So long as enough of the network survives to pass along the ideology and culture, along with lessons learned, the new network will likely be more dangerous and more resilient than its predecessor, much like the more resistant forms of bacteria that can emerge as a result of mis-use of antibiotics. In fact, the European resistance movements during World War II exhibited just this kind of toughness and survivability. In addition to its networked structure, there are other attributes of 4GW that should concern the 1RP (editor’s note: First Responder) community. The first is its transnational nature. An operation can be approved in Afghanistan, planned in Germany, funded in the Middle East, and carried out in the United States, as was the 9/11 attack. There is no one state we can retaliate against, nor one nationality we can profile against. Further, because it is transnational, it can involve networks of networks, such as alQa’ida attempting to cooperate with narco-trafficking organizations in Latin America to trade access to potential base areas and help in infiltrating the US for assistance in distributing narcotics.13 The upshot is that the lack of identifiable 4GW activity may not be an indication that an attack is not in the works, if the su4rveillance is being conducted by someone else. One of the more unpleasant aspects of insurgencies that will likely carry over to 4GWis their use of disguise, camouflage, and the other tools of deception. Because they are militarily weak, 4GW groups survive not by confronting superior firepower but by staying out of its sights. Those that have survived have become masters of concealment and deception, making it even more difficult to pick up early warning signals. This is why simple ethnic or national profiling will not work – 4GWteams will go to great lengths not to be identified as members of the groups in question. Skin color, eye color, and hair color are trivially easy to change, and the criminal infrastructure that already exists in most developed countries makes it simple to get drivers licenses or other means of identification (as any victim of identity theft can attest.) In a pinch, one can always recruit a member of a non-targeted group, such as the “shoe bomber,” Richard Reid, and it would be a mistake to assume the next batch will be as poorly trained. If we’re going to let Icelanders (or grandmothers or parents with toddlers, or whoever) through with less security screening than Saudis or Pakistanis or Jordanians, see if you can guess what the next aircraft hijacker will look like. Another unpleasant fact of 4GW is that like insurgency from whence it sprang, 4GW will be a protracted struggle.14 As Henry Kissinger once noted, if the guerillas don’t lose, they win, so they have all the motivation they need to keep going for as long as they think it will take.15 First responders should not draw comfort from what seems like a pause in attacks – operational cycles can stretch over several years, and a fourth generation war can span decades.16 But the most unpleasant fact of 4GW is that in it, we have finally reached the level of total war.17 In the eyes of the 4GW attacker, there are no civilians and no noncombatants. A concern for public relations offers the only reason for limiting the scope or violence of the attacks. What seems like “terrorism” to us, or senseless, random violence, may appear to the 4GW network as a legitimate way to persuade the foreign state government to withdraw, that is to stop the war. Such a strategy is nothing new. It was what Sherman had in mind during his marches through the South after the fall of Vicksburg (July 1863).18 In its local areas, the 4GW organization will spread the message that the foreign state has killed many civilians, which in a war of an advanced state versus a Third World country will often be true and will always be believed. What this means is that when a 4GW group decides to directly attack the United States or another state involved in “their” struggle, no level of violence, even nuclear, is ruled out. They may calculate that the message they are sending to the state government, to the state’s population, to undecided elements in other parts of the world, and to their own members is worth any backlash from the scenes of horror and brutality that ensue.

### 1AC Russia adv

#### Rapid US SMR commercialization stops Russian market dominance- they’ll sell floating reactors globally

Ferguson 2010 (Dr. Charles D. Ferguson, President of the Federation of American Scientists, Adjunct Professor in the Security Studies Program at Georgetown University and Adjunct Lecturer in the National Security Studies Program at the Johns Hopkins University, May 19, 2010, Statement before the House Committee on Science and Technology for the hearing on Charting the Course for American Nuclear Technology: Evaluating the Department of Energy’s Nuclear Energy Research and Development Roadmap, http://www.fas.org/press/\_docs/05192010\_Testimony\_HouseScienceCommHearing%20.pdf)

The United States and several other countries have considerable experience in building and operating small and medium power reactors. The U.S. Navy, for example, has used small power reactors since the 1950s to provide propulsion and electrical power for submarines, aircraft carriers, and some other surface warships. China, France, Russia, and the United Kingdom have also developed nuclear powered naval vessels that use small reactors. Notably, Russia has deployed its KLT-40S and similarly designed small power reactors on icebreakers and has in recent years proposed building and selling barges that would carry these types of reactors for use in sea-side communities throughout the world. China has already exported small and medium power reactors. In 1991, China began building a reactor in Pakistan and started constructing a second reactor there in 2005. In the wake of the U.S.-India nuclear deal, Beijing has recently reached agreement with Islamabad to build two additional reactors rated at 650 MWe.2¶ One of the unintended consequences of more than 30 years of sanctions on India’s nuclear program is that India had concentrated its domestic nuclear industry on building small and medium power reactors based on Canadian pressurized heavy water technology, or Candu-type reactors. Pressurized heavy water reactors (PHWRs) pose proliferation concerns because they can be readily operated in a mode optimal for producing weapons-grade plutonium and can be refueled during power operations. Online refueling makes it exceedingly difficult to determine when refueling is occurring based solely on outside observations, for example, through satellite monitoring of the plant’s operations. Thus, the chances for potential diversion of fissile material increase. This scenario for misuse underscores the need for more frequent inspections of these facilities. But the limited resources of the International Atomic Energy Agency have resulted in a rate of inspections that are too infrequent to detect a diversion of a weapon’s worth of material.3 The opening of the international nuclear market to India may lead to further spread of PHWR technologies to more states. For example, last year, the Nuclear Power Corporation of India, Ltd. (NPCIL) expressed interest in selling PHWRs to Malaysia.4 NPCIL is the only global manufacturer of 220 MWe PHWRs. New Delhi favors South-to-South cooperation; consequently developing states in Southeast Asia, sub-Saharan Africa, and South America could become recipients of these technologies in the coming years to next few decades. Many of these countries would opt for small and medium power reactors because their electrical grids do not presently have the capacity to support large power reactors and they would likely not have the financial ability to purchase large reactors.¶ What are the implications for the United States of Chinese and Indian efforts to sell small and medium power reactors? Because China and India already have the manufacturing and marketing capability for these reactors, the United States faces an economically competitive disadvantage. Because the United States has yet to license such reactors for domestic use, it has placed itself at an additional market disadvantage. By the time the United States has licensed such reactors, China and India as well as other competitors may have established a strong hold on this emerging market.¶ The U.S. Nuclear Regulatory Commission cautioned on December 15, 2008 that the “licensing of new, small modular reactors is not just around the corner. The NRC’s attention and resources now are focused on the large-scale reactors being proposed to serve millions of Americans, rather than smaller devices with both limited power production and possible industrial process applications.” The NRC’s statement further underscored that “examining proposals for radically different technology will likely require an exhaustive review” ... before “such time as there is a formal proposal, the NRC will, as directed by Congress, continue to devote the majority of its resources to addressing the current technology base.”6 Earlier this year, the NRC devoted consideration to presentations on small modular reactors from the Nuclear Energy Institute, the Department of Energy, and the Rural Electric Cooperative Association among other stakeholders.7 At least seven vendors have proposed that their designs receive attention from the NRC.8¶ Given the differences in design philosophy among these vendors and the fact that none of these designs have penetrated the commercial market, it is too soon to tell which, if any, will emerge as market champions. Nonetheless, because of the early stage in development, the United States has an opportunity to state clearly the criteria for successful use of SMRs. But because of the head start of China and India, the United States should not procrastinate and should take a leadership role in setting the standards for safe, secure, and proliferation-resistant SMRs that can compete in the market. Several years ago, the United States sponsored assessments to determine these criteria.9 While the Platonic ideal for small modular reactors will likely not be realized, it is worth specifying what such an SMR would be. N. W. Brown and J. A. Hasberger of the Lawrence Livermore National Laboratory assessed that reactors in developing countries must:¶ • “achieve reliably safe operation with a minimum of maintenance and supporting infrastructure;¶ • offer economic competitiveness with alternative energy sources available to the candidate sites;¶ • demonstrate significant improvements in proliferation resistance relative to existing reactor systems.”10¶ Pointing to the available technologies at that time from Argentina, China, and Russia, they determined that “these countries tend to focus on the development of the reactor without integrated considerations of the overall fuel cycle, proliferation, or waste issues.” They emphasized that what is required for successful development of an SMR is “a comprehensive systems approach that considers all aspects of manufacturing, transportation, operation, and ultimate disposal.”

#### Al Qaeda will attack floating SMRS- collapses more than half of global trade

Nitkin and Andreyev 2011 (Alexander Nikitin, former Russian submarine officer and nuclear safety inspector, and Leonid Andreyev, Bellona researcher and Doctor of Economics, 2011, “Floating nuclear power plants,” Bellona, http://www.bellona.org/filearchive/fil\_fnpp-en.pdf)

Physical security of nuclear sites plays an important role in advancing the goals of nuclear non- proliferation and in countering the threat of terrorism. This is why physical protection of floating nuclear power plants will be one of the critical issues in ensuring the safety of these facilities in the context of export deliveries. If this Russian technology is exported and put to use on an international scale, it must be guaranteed, first and foremost, that this activity would comply with the Treaty on the Non- Proliferation of Nuclear Weapons (NPT),xxiv as well as be in accordance with two IAEA documents – the Convention on the Physical Protection of Nuclear Material (CPPNM)xxv and Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities.xxvi¶ Several reports have studied the possibilities of using floating nuclear power plants in Asia [16]. These reports point out that Southeast Asia is one of the world’s most troubling hot spots in terms of international terrorism – a given, to a large extent, of the particular geography of the region. This is where strategic international trade routes lie, along which between 200 and 600 commercial vessels pass daily, carrying crude oil and other hydrocarbon fues, as well as chemicals, exported and imported by Japan, China, South Korea, and other Asia-Pacific countries. This is also where important sea and air routes cross toward South Asia and the Middle East. In the UN’s estimates, up to 80 percent of the six billion tonnes of cargoes traded annually in the world is shipped by sea – and of that percentage, almost 75 percent is moved through one of the five shipping “pinch points” – the narrow waterways of the Panama and Suez Canals, the Strait of Gibraltar and the Strait of Hormuz, as well as the Strait of Malacca in Southeast Asia. The news agency World Net Daily has reported that the international militant Islamist network al-Qaeda has already managed to procure two dozen vessels for the group’s terrorist activities. Al-Qaeda, the World Net Daily said, may use its ships to take a cargo of deadly chemicals, or a so-called “dirty bomb” – a radiological weapon capable of dispersing radioactive material across a wide area by means of conventional explosives – or even nuclear weapons to a civilian port in order to carry out a terrorist attack there. These ships are, in essence, the suicide bombers of the terrorist future. Even without taking into account the ever-present piracy risks that the international shipping trade is facing daily, there is the real threat that the most important shipping routes and fairways may prove vulnerable to an attack by al-Qaeda or a like-minded group with close ties with it [12]. Indonesia and Malaysia, as countries that have, among other potential customers, already expressed an interest in Russia’s FNPP project, are of most concern in that regard, since a combination of their geography, the booming shipping trade along their coastlines, and other factors forms just such conditions that create a considerable risk of terrorist attacks at sea. This risk is compounded, furthermore, by the alarming statistics of pirate attacks in the region. For a floating nuclear power plant lying at anchor at its place of operation, the threat of falling prey to a pirate or terrorist attack and its crew being captured for ransom, or to use as hostages in a negotiation, is very real – and so is the risk that the nuclear materials or radioactive waste on board may also be hijacked in the process for use in further criminal activities. Analyses have shown that operating a floating nuclear power plant in the waters off the shores of the island states of Indonesia and Malaysia may not just be unsafe for those countries and their closest neighbours, but may also pose a global risk. Should a terrorist attack scenario be carried out successfully and the nuclear vessel captured, with the nuclear materials and/or radioactive waste on board falling into the wrong hands, these materials may then be used to perpetrate criminal acts elsewhere in the world. Additionally, the reports that examine the prospects of operating floating nuclear power plants in the Asia-Pacific region also mention the dangers and risks that arise in case of an outbreak of armed hostilities on the territory of the customer country.

#### They have the capability

Lawlor 2011 (Major General Bruce Lawlor, served on the White House’s Homeland Security Council and was the first chief of staff for the Department of Homeland Security and currently director with Virginia Tech's Simulation and Decision Informatics Laboratory, December 15, 2011, “The Black Sea: Center of the nuclear black market,” Bulletin of the Atomic Scientists, http://thebulletin.org/web-edition/features/the-black-sea-center-of-the-nuclear-black-market)

Harvard's Project on Managing the Atom has published a comprehensive report on this threat, combining several well-known facts to create an unsettling picture. First, several terrorist groups, particularly Al Qaeda, have been trying to get their hands on a nuclear weapon for years. Osama bin Laden referred to it as a "religious duty" and embraced the idea of an American Hiroshima. Al Qaeda operatives have consulted with nuclear experts, tested conventional explosives for use in nuclear bombs, and attempted to purchase working nuclear devices. There is nothing to suggest that bin Laden's death has ended this quest. Second, the Harvard study notes that if a sophisticated terrorist group acquired sufficient weapon-grade material, it would be able to build at least a crude, gun-type atomic bomb (WMD Commission, 2005). A nuclear device of this type wouldn't be transported to the target by a sophisticated delivery system; its more likely delivery mode would be a rental truck. Third, although terrorist groups may not be able to manufacture the plutonium or weapon-grade uranium to make a crude bomb, it is not beyond their ability to buy or steal it. And fourth, nuclear smuggling is very difficult to combat. Globalization, huge profit margins, and organized crime have created a multibillion-dollar illicit-trafficking market that is producing ever more sophisticated methods of keeping contraband from being discovered. Nuclear contraband has become a part of that illicit market.

#### Every plant is ten nuclear weapons

Grossman 2010 (Karl Grossman, full professor of journalism at the State University of New York College, July 28, 2010, “Floating Chernobyls,” Counterpunch, http://nuclearfreeplanet.org/blogs/counterpunch--karl-grossman-floating-chernobyls.html)

In a chapter on the floating plants as “an attractive object of nuclear terrorism,” the book cites an impossibility of providing “protection from torpedo attack or from underwater saboteurs, and on the surface from a rocket-bombing strike.” Further, the “spreading” of the floating plants “all over the world will allow” this to be done “much easier and with more efficiency.” Moreover, each floating nuclear plant will contain “the ready material for ten nuclear bombs in the way of enriched uranium of weapon quality.”

#### Causes sustained shut-down of trade, spurs protectionism and collapses the global economy

Richardson 2004 (Michael Richardson, former Asia Editor of the International Herald Tribune and a Visiting Senior Research Fellow at the Institute of Southeast Asian Studies, 2004, “A Time Bomb for Global Trade,” google books)

A nuclear 9/11 would make the World Trade Center attacks look like a warning shot. It would be impossible to calculate the economic costs, because there is no way to calculate how long it would take for citizens to recover the confidence they need to spend and invest. The public would assume that if the terrorists had one nuclear weapon, they could get another. If they would use it in one city, they would use it in another. If even one goes off, it’s hard to see how we would recover. We have to prevent it from happening- ever. Former US Senator and arms control expert, Sam Nunn, who co-chairs the Nuclear Threat Initiatve. The use of either a nuclear or powerful radiological bomb in a major port-city would cut the arteries of maritime commerce if it was believed to have come by sea. It would halt many of the world’s trade and severely damage the global economy, as governments scrambled to put in place extra security measures to proect their people, cities and economies. Such measures would be drastic and include: lengthy cargo inspections in the ports of the affected country, as well as in ports of nations that did extensive sea trade with it, or even the complete closure of ports for an indefinite period, while extra checks and safeguards were put in place to allay public anxiety.

#### Retaliation causes extinction

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

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

#### Protectionism lowers the threshold for all conflict – makes escalation more likely – causes a laundry list of impacts

Patrick 2009 (Stewart Patrick, senior fellow and director of the Program on International Institutions and Global Governance at the Council on Foreign Relations, March 2009 “Protecting Free Trade” The National Interest http://nationalinterest.org/article/protecting-free-trade-3060)

President Obama and his foreign counterparts should reflect on the lessons of the 1930s-and the insights of Cordell Hull. The longest-serving secretary of state in American history (1933-1944), Hull helped guide the United States through the Depression and World War II. He also understood a fundamental truth: "When goods move, soldiers don't." In the 1930s, global recession had catastrophic political consequences-in part because policymakers took exactly the wrong approach. Starting with America's own Smoot Hawley Tariff of 1930, the world's major trading nations tried to insulate themselves by adopting inward looking protectionist and discriminatory policies. The result was a vicious, self-defeating cycle of tit-for-tat retaliation. As states took refuge in prohibitive tariffs, import quotas, export subsidies and competitive devaluations, international commerce devolved into a desperate competition for dwindling markets. Between 1929 and 1933, the value of world trade plummeted from $50 billion to $15 billion. Global economic activity went into a death spiral, exacerbating the depth and length of the Great Depression. The economic consequences of protectionism were bad enough. The political consequences were worse. As Hull recognized, global economic fragmentation lowered standards of living, drove unemployment higher and increased poverty-accentuating social upheaval and leaving destitute populations "easy prey to dictators and desperadoes." The rise of Nazism in Germany, fascism in Italy and militarism in Japan is impossible to divorce from the economic turmoil, which allowed demagogic leaders to mobilize support among alienated masses nursing nationalist grievances. Open economic warfare poisoned the diplomatic climate and exacerbated great power rivalries, raising, in Hull's view, "constant temptation to use force, or threat of force, to obtain what could have been got through normal processes of trade." Assistant Secretary William Clayton agreed: "Nations which act as enemies in the marketplace cannot long be friends at the council table." This is what makes growing protectionism and discrimination among the world's major trading powers today so alarming. In 2008 world trade declined for the first time since 1982. And despite their pledges, seventeen G-20 members have adopted significant trade restrictions. "Buy American" provisions in the U.S. stimulus package have been matched by similar measures elsewhere, with the EU ambassador to Washington declaring that "Nobody will take this lying down." Brussels has resumed export subsidies to EU dairy farmers and restricted imports from the United States and China. Meanwhile, India is threatening new tariffs on steel imports and cars; Russia has enacted some thirty new tariffs and export subsidies. In a sign of the global mood, WTO antidumping cases are up 40 percent since last year. Even less blatant forms of economic nationalism, such as banks restricting lending to "safer" domestic companies, risk shutting down global capital flows and exacerbating the current crisis. If unchecked, such economic nationalism could raise diplomatic tensions among the world's major powers. At particular risk are U.S. relations with China, Washington's most important bilateral interlocutor in the twenty-first century. China has called the "Buy American" provisions "poison"-not exactly how the Obama administration wants to start off the relationship. U.S. Treasury Secretary Timothy Geithner's ill-timed comments about China's currency "manipulation" and his promise of an "aggressive" U.S. response were not especially helpful either, nor is Congress' preoccupation with "unfair" Chinese trade and currency practices. For its part, Beijing has responded to the global slump by rolling back some of the liberalizing reforms introduced over the past thirty years. Such practices, including state subsidies, collide with the spirit and sometimes the law of open trade. The Obama administration must find common ground with Beijing on a coordinated response, or risk retaliatory protectionism that could severely damage both economies and escalate into political confrontation. A trade war is the last thing the United States needs, given that China holds $1 trillion of our debt and will be critical to solving flashpoints ranging from Iran to North Korea. In the 1930s, authoritarian great-power governments responded to the global downturn by adopting more nationalistic and aggressive policies. Today, the economic crisis may well fuel rising nationalism and regional assertiveness in emerging countries. Russia is a case in point. Although some predict that the economic crisis will temper Moscow's international ambitions, evidence for such geopolitical modesty is slim to date. Neither the collapse of its stock market nor the decline in oil prices has kept Russia from flexing its muscles from Ukraine to Kyrgyzstan. While some expect the economic crisis to challenge Putin's grip on power, there is no guarantee that Washington will find any successor regime less nationalistic and aggressive. Beyond generating great power antagonism, misguided protectionism could also exacerbate political upheaval in the developing world. As Director of National Intelligence Dennis Blair recently testified, the downturn has already aggravated political instability in a quarter of the world's nations. In many emerging countries, including important players like South Africa, Ukraine and Mexico, political stability rests on a precarious balance. Protectionist policies could well push developing economies and emerging market exporters over the edge. In Pakistan, a protracted economic crisis could precipitate the collapse of the regime and fragmentation of the state. No surprise, then, that President Obama is the first U.S. president to receive a daily economic intelligence briefing, distilling the security implications of the global crisis.

#### Russia will use SMR exports to undermine US influence in Latin America

Dobransky 2011 (Steve Dobransky. Adjunct Professor at Cleveland State University in IR, March 2011, “The Nuclear Penetration of the Monroe Doctrine,” paper presented at the annual meeting of the International Studies Association Annual Conference "Global Governance: Political Authority in Transition,” http://www.airpower.au.af.mil/apjinternational/apj-s/2011/2011-1/2011\_1\_02\_dobransky\_eng\_s.pdf)

Russia has shown in recent experience that one nuclear power plant constructed is usually not enough. Led by Rosatom and Atomstroyexport, Russia’s state-controlled civilian nuclear power corporations, billions of dollars in potential nuclear power plant opportunities await throughout Latin America.2 Once the deal enters the construction phase, there may be no stopping the Russians in using it as the model to build many more nuclear power plants in Venezuela and the rest of Latin America. With more nuclear deals will likely come an increasing dependence on Russia for future-enriched uranium, expertise, and maintenance, which are all usually incorporated into a nuclear energy contract. This may seriously challenge and undermine America’s power and influence in the region. Furthermore, as shown in the last several years between Russia and Venezuela, with a nuclear energy deal often comes many more economic and military agreements worth billions of dollars between the partners. Thus, a nuclear energy agreement can go well beyond the contract itself or, at the very least, significantly improve a nuclear supplying country’s chances of winning other valuable agreements with the customer in competitive economic situations. This also could weaken the U.S. and its control over the region.3 In the end, once the Russo-Venezuelan precedent is set, the U.S. and others will have to accept is as a legitimate framework for other extra-hemispheric powers to work within. This may lead to a flood of nuclear reactor deals between Russia and the rest of Latin America. It may lead other countries, especially China, into the fray as well. Considering the vast opportunities for nuclear power plant development and the finite amount of uranium, it is well understood that nuclear energy will become more of a zero-sum game in the coming decades, especially in terms of new plant development. And, this will make it an extremely valuable endeavor in the future. Overall, the U.S. must do a much better job in defining and modernizing the Monroe Doctrine for the 21st century. Then, the U.S. must compete more aggressively and effectively with other countries seeking to penetrate the region through nuclear energy deals and other major agreements. The Russo-Venezuelan nuclear energy deal is likely just the first of many more challenges to come to the U.S.’s dominance and leadership in the region.

#### Time is running out- Russian foothold massive accelerates development

Dobransky 2011 (Steve Dobransky. Adjunct Professor at Cleveland State University in IR, March 2011, “The Nuclear Penetration of the Monroe Doctrine,” paper presented at the annual meeting of the International Studies Association Annual Conference "Global Governance: Political Authority in Transition,” http://www.airpower.au.af.mil/apjinternational/apj-s/2011/2011-1/2011\_1\_02\_dobransky\_eng\_s.pdf)

Russia is implementing a strategy of moving full speed ahead with exporting nuclear reactors to the entire world. These efforts can greatly increase its capabilities and personnel and, thereafter, be directed vigorously at Latin America. Russia, at first, focused on regional deals with Eastern Europe, China, India, Iran, and other close-by neighbors, and now it is focusing on worldwide contracts. Not concerned with other countries’ domestic politics or regional issues, Russia is intent on making billions of dollars with whoever is willing to sign a nuclear deal with it. So far, Iran has been in the front of the line, with the recent completion of the Bushehr nuclear power plant. More Russian reactors are expected to be built in Iran. Russia also has signed a deal recently with India to build at least six nuclear reactors. Many more there and elsewhere are likely to follow. The only thing holding back the Russians from running the nuclear power plant table is the Russians themselves and their still-growing export capacity. More deals, however, mean more experience, customers, and reduced costs/increased profits overall.9 They also tend to lead to many more trade agreements in other areas, both military and non- military items, as Russia’s recent multi-million dollar tank deal with Venezuela demonstrates.10 Russia will soon become (if it has not already) the go-to place for affordable nuclear power plants for developing countries, with no political strings attached. And, it will reap the benefits in that area and, likely, many more areas.

#### US leadership prevents Latin America collapse- Russian dominance ensures instability and gives them unstoppable global leverage

Dobransky 2011 (Steve Dobransky. Adjunct Professor at Cleveland State University in IR, March 2011, “The Nuclear Penetration of the Monroe Doctrine,” paper presented at the annual meeting of the International Studies Association Annual Conference "Global Governance: Political Authority in Transition,” http://www.airpower.au.af.mil/apjinternational/apj-s/2011/2011-1/2011\_1\_02\_dobransky\_eng\_s.pdf)

Finally, the U.S. can just go all-out and compete with the Russians and others in the nuclear energy field throughout Latin America and the rest of the world. The U.S. can use all of its powers, influences, and position to run the nuclear energy gauntlet in Latin America. If this option is pursued, the U.S. could make billions of dollars. And, it may transform the Latin American countries into much more compliant and friendly states, by engendering a tremendous amount of influence and goodwill throughout the region; though, on the other hand, it may make them a lot more independent of the U.S. and outside energy sources and supply lines. In the long term, it may even help prevent a major economic collapse of Latin American countries due to future major shortages and extreme costs of energy resources, primarily oil. This could save the U.S. much money, influence, and hardship by not having the negative impact of collapsing and unstable Latin American countries, as well as allowing the U.S. to avoid the pressures to intervene to protect American interests and citizens.¶ In the end, if the U.S. does not fundamentally reassess its current nuclear energy policies particularly towards Latin America, then Russia may very well supplant the U.S. as the most influential power in Latin America and throughout the world. The Monroe Doctrine, subsequently, will go from penetrated to destroyed. Energy security will be the supreme power and goal in the world in the coming decades. The Russians are going full speed ahead in promoting energy as a foreign policy instrument that has the potential to reap billions of dollars and tremendous diplomatic influence. Will the U.S. alter course and react accordingly, especially in its own “backyard”? The U.S. needs to fully consider all the consequences of maintaining the status quo. Nuclear exports hold the promise of greater political, economic, and security influence. On the other hand, lost nuclear energy opportunities will mean significant reductions in power, money, and position. It is ultimately up to the U.S. to determine whether to meet the Russian challenge in the nuclear energy arena or to throw up the flag and go out with a whimper. The U.S. can compete full-scale with the Russians and others in the nuclear energy field, stand by on the sidelines and try to minimize the nuclear expansion in Latin America, or go all-out to quarantine the region in some form or another. The U.S. must soon determine its policy stance and clearly define and update the Monroe Doctrine. But, if complete inaction is the final choice, then there is no need to worry. The Russians will be sure to turn off the lights when the U.S. is¶ gone—and, turn on its nuclear energy plants in Latin America. Thus will go the nuclear chess board and Russia’s ascendance. And, thus, will go the Monroe Doctrine.

#### Russian expansion causes nuclear war

Blank 2009 (Stephen Blank, Research Professor of National Security Affairs at the Strategic Studies Institute of the U.S. Army War College, March 2009, “Russia And Arms Control: Are There Opportunities For The Obama Administration?,” online)

Proliferators or nuclear states like China and Russia can then deter regional or intercontinental attacks either by denial or by threat of retaliation. 168 Given a multipolar world structure with little ideological rivalry among major powers, it is unlikely that they will go to war with each other. Rather, like Russia, they will strive for exclusive hegemony in their own “sphere of influence” and use nuclear instruments towards that end. However, wars may well break out between major powers and weaker “peripheral” states or between peripheral and semiperipheral states given their lack of domestic legitimacy, the absence of the means of crisis prevention, the visible absence of crisis management mechanisms, and their strategic calculation that asymmetric wars might give them the victory or respite they need. 169 Simultaneously, The states of periphery and semiperiphery have far more opportunities for political maneuvering. Since war remains a political option, these states may find it convenient to exercise their military power as a means for achieving political objectives. Thus international crises may increase in number. This has two important implications for the use of WMD. First, they may be used deliberately to offer a decisive victory (or in Russia’s case, to achieve “intra-war escalation control”—author 170 ) to the striker, or for defensive purposes when imbalances 7 in military capabilities are significant; and second, crises increase the possibilities of inadvertent or accidental wars involving WMD. 171 Obviously nuclear proliferators or states that are expanding their nuclear arsenals like Russia can exercise a great influence upon world politics if they chose to defy the prevailing consensus and use their weapons not as defensive weapons, as has been commonly thought, but as offensive weapons to threaten other states and deter nuclear powers. Their decision to go either for cooperative security and strengthened international military-political norms of action, or for individual national “egotism” will critically affect world politics. For, as Roberts observes, But if they drift away from those efforts [to bring about more cooperative security], the consequences could be profound. At the very least, the effective functioning of inherited mechanisms of world order, such as the special responsibility of the “great powers” in the management of the interstate system, especially problems of armed aggression, under the aegis of collective security, could be significantly impaired. Armed with the ability to defeat an intervention, or impose substantial costs in blood or money on an intervening force or the populaces of the nations marshaling that force, the newly empowered tier could bring an end to collective security operations, undermine the credibility of alliance commitments by the great powers, [undermine guarantees of extended deterrence by them to threatened nations and states] extend alliances of their own, and perhaps make wars of aggression on their neighbors or their own people.

#### Latin American instability escalates draws in great powers

Rochlin 1994 (James Francis Rochlin, Professor of Political Science at Okanagan University, 1994, “Discovering the Americas: The Evolution of Canadian Foreign Policy Towards Latin America,” pages 130-131)

While there were economic motivations for Canadian policy in Central America, security considerations were perhaps more important. Canada possessed an interest in promoting stability in the face of a potential decline of U.S. hegemony in the Americas. Perceptions of declining U.S. influence in the region – which had some credibility in 1979-1984 due to the wildly inequitable divisions of wealth in some U.S. client states in Latin America, in addition to political repression, under-development, mounting external debt, anti-American sentiment produced by decades of subjugation to U.S. strategic and economic interests, and so on – were linked to the prospect of explosive events occurring in the hemisphere. Hence, the Central American imbroglio was viewed as a fuse which could ignite a cataclysmic process throughout the region. Analysts at the time worried that in a worst-case scenario, instability created by a regional war, beginning in Central America and spreading elsewhere in Latin America, might preoccupy Washington to the extent that the United States would be unable to perform adequately its important hegemonic role in the international arena – a concern expressed by the director of research for Canada’s Standing Committee Report on Central America. It was feared that such a predicament could generate increased global instability and perhaps even a hegemonic war. This is one of the motivations which led Canada to become involved in efforts at regional conflict resolution, such as Contadora, as will be discussed in the next chapter.

### 1AC Plan

#### Plan: The United States Federal Government should offer substantial competitive power purchase agreements for electricity from small modular nuclear reactors for military installations in the United States.

### 1AC Solvency

**No disads- Lots of SMR funding now, Obama’s committed**

Biello 2012 (David Biello, journalist at Scientific American, April 19, 2012, Missourians for a Better Energy Future, http://www.moenergyfuture.org/news/small-reactors-make-a-bid-to-revive-nuclear-power/)

Small may be beautiful for the nuclear power industry So argue a host of would-be builders of novel nuclear reactors. While the U.S. government has not given up on investing in large units that boast conventional designs, the Department of Energy has also announced the availability of $450 million in funds to support engineering and licensing of so-called "small modular reactors."¶ "The Obama Administration and the Energy Department are committed to an all-of-the-above energy strategy that develops every source of American energy, including nuclear power," said Secretary of Energy Steven Chu in a statement announcing the funding, which aims to get such modular reactors hooked into the grid by 2022. "The Energy Department and private industry are working to position America as the leader in advanced nuclear energy technology and manufacturing."

**But the DOD’s key- Only way to solve barriers and achieve commercialization**

Andres and Breetz 2011 (Richard B. Andres, Professor of national Security Strategy at the national War College and a Senior fellow and energy and environmental Security and Policy Chair in the Center for Strategic research, institute for national Strategic Studies, at the national Defense University, and Hanna L. Breetz, doctoral candidate in the Department of Political Science at the Massachusetts institute of technology, February 2011, “Small Nuclear Reactors for Military Installations: Capabilities, Costs, and Technological Implications,” National Defense University Strategic Forum, http://www.ndu.edu/press/lib/pdf/strforum/sf-262.pdf)

The preceding analysis suggests that DOD should seriously consider taking a leadership role on small reactors. This new technology has the potential to solve two of the most serious energy-related problems faced by the department today. Small reactors could island domestic military bases and nearby communities, thereby protect- ing them from grid outages. They could also drastically reduce the need for the highly vulnerable fuel convoys used to supply forward operating bases abroad.¶ The technology being proposed for small reactors (much of which was originally developed in U.S. Gov- ernment labs) is promising. A number of the planned designs are self-contained and highly mobile, and could meet the needs of either domestic or forward bases. Some promise to be virtually impervious to accidents, with design characteristics that might allow them to beused even in active operational environments. These re- actors are potentially safer than conventional light wa- ter reactors. The argument that this technology could be useful at domestic bases is virtually unassailable. The argument for using this technology in operational units abroad is less conclusive; however, because of its poten- tial to save lives, it warrants serious investigation.¶ Unfortunately, the technology for these reactors is, for the most part, caught between the drawing board and production. Claims regarding the field utility and safety of various reactors are plausible, but authoritative evalu- ation will require substantial investment and technology demonstration. In the U.S. market, DOD could play an important role in this area. In the event that the U.S. small reactor industry succeeds without DOD support, the types of designs that emerge might not be useful for the department since some of the larger, more efficient designs that have greater appeal to private industry would not fit the department’s needs. Thus, there is significant incentive for DOD to intervene to provide a market, both to help the industry survive and to shape its direction.¶ Since the 1970s, in the **U**nited **S**tates, **only the military** has overcome the considerable barriers to building nuclear reactors. This will probably be the case with small reactors as well. If DOD leads as a first mover in this market—initially by providing analysis of costs, staffing, reactor lines, and security, and, when possible, by moving forward with a pilot installation—the new technology will likely survive and be applicable to DOD needs. If DOD does not, it is possible the tech- nology will be unavailable in the future for either U.S. military or commercial use.

#### Only PPAs solve-

#### Incentivizes production- R&D projects don’t commercialize

Madia 2012 (William Madia, Chairman of the Board of Overseers and Vice President for the SLAC National Accelerator Laboratory at Stanford University, previously the Laboratory Director at the Oak Ridge National Laboratory, Spring 2012, “SMALL MODULAR REACTORS: A POTENTIAL GAME-CHANGING TECHNOLOGY,” Stanford Energy Club, http://energyclub.stanford.edu/index.php/Journal/Small\_Modular\_Reactors\_by\_William\_Madia)

Throughout the history of NPP development, plants grew in size based on classic “economies of scale” considerations. Bigger was cheaper when viewed on a cost per installed kilowatt basis. The drivers that caused the industry to build bigger and bigger NPPs are being offset today by various considerations that make this new breed of SMRs viable. ¶ ¶ Factory manufacturing is one of these considerations. Most SMRs are small enough to allow them to be factory built and shipped by rail or barge to the power plant sites. Numerous industry “rules of thumb” for factory manufacturing show dramatic savings as compared to “on-site” outdoor building methods. Significant schedule advantages are also available because weather delay considerations are reduced. Of course, from a total cost perspective, some of these savings will be offset by the capital costs associated with building multiple modules to get the same total power output. Based on analyses I have seen, overnight costs in the range of $5000 to $8000 per installed kilowatt are achievable. If these analyses are correct, it means that the economies of scale arguments that drove current designs to GW scales could be countered by the simplicity and factory-build possibilities of SMRs.¶ ¶ No one has yet obtained a design certification from the Nuclear Regulatory Commission (NRC) for an SMR, so we must consider licensing to be one of the largest unknowns facing these new designs. Nevertheless, since the most developed of the SMRs are mostly based on proven and licensed components and are configured at power levels that are passively safe, we should not expect many new significant licensing issues to be raised for this class of reactor. Still, the NRC will need to address issues uniquely associated with SMRs, such as the number of reactor modules any one reactor operator can safely operate and the size of the emergency planning zone for SMRs.¶ ¶ To determine if SMRs hold the potential for changing the game in carbon-free power generation, it is imperative that we test the design, engineering, licensing, and economic assumptions with some sort of public-private development and demonstration program. Instead of having government simply invest in research and development to “buy down” the risks associated with SMRs, I propose a more novel approach. Since the federal government is a major power consumer, it should commit to being the “first mover” of SMRs. This means purchasing the first few hundred MWs of SMR generation capacity and dedicating it to federal use. The advantages of this approach are straightforward. The government would both reduce licensing and economic risks to the point where utilities might invest in subsequent units, thus jumpstarting the SMR industry. It would then also be the recipient of additional carbon-free energy generation capacity. This seems like a very sensible role for government to play without getting into the heavy politics of nuclear waste, corporate welfare, or carbon taxes.

**Certainty- PPAs vital to investment and financing**

Hinckley 2012 (Elias Hinckley, Energy Attorney and leader of the clean energy practice at Kilpatrick Townsend, August 29, 2012, “5 Reasons Why Good Energy Projects Don’t Get Financed,” [www.consumerenergyreport.com/2012/08/29/5-reasons-why-good-energy-projects-dont-get-financed/](http://www.consumerenergyreport.com/2012/08/29/5-reasons-why-good-energy-projects-dont-get-financed/))

Much of the market uncertainties in a typical energy project can be partially managed by a long-term fixed price off-take contract (such as a power purchase agreement), which shields an investor from most price volatility risk. For example, a solar developer can assume payment, at a known price, for electricity it generates if that electricity is sold under a solid long-term power purchase agreement. The project will receive the expected revenue regardless of the price movement of electricity, which allows for revenue certainty and protection for the project in the event prices drop below levels used to calculate project returns. Where a long term contract is not available, an alternative strategy is to add a hedge (which is an instrument that acts as an offset or guarantee against the price going up or down). However, hedging is generally difficult to do beyond a few years, and since project performance is often measured over 10 to 20 years it often only manages price risk during the early operation of a project. When building a typical energy project, at least in the current market, a long-term contract for electricity is assumed. Without that long-term contract, securing financing for a power project would be virtually impossible. Long-term contracts for natural gas, crude derivatives, and biomass feedstock are generally not available. Projects subject to markets for these commodities, therefore generally have to have higher margins to provide comfort to investors.

**SMRS are extremely safe**

**Kessides 2010** (Ioannis N. Kessides, Lead Economist in the World Bank's Development Research Group, June 2012, “The Future of the Nuclear Industry Reconsidered Risks, Uncertainties, and Continued Potential,” The World Bank Development Research Group Environment and Energy Team, http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2012/06/29/000158349\_20120629130837/Rendered/INDEX/WPS6112.txt)

Most SMR concepts envision widespread deployment of a large number of small nuclear plants sited in diverse environments and frequently in close proximity to users. These considerations place very stringent requirements on reliability and safety performance—arguably even more exacting relative to traditional large-scale nuclear plants. The need for enhanced levels of safety has led to design options that maximize the use of inherent and passive safety features and incorporate additional layers of defense in depth (IAEA, 2009).18 These safety features can be more easily and effectively implemented in SMRs because of their larger surface- to-volume ratio, reduced core power density, lower source term, and less frequent (multi-year) refueling. For example, large surface-to-volume ratios facilitate the passive (with no external source of electrical power or stored energy) removal of decay heat.¶ SMRs employ an enveloping design approach that seeks to eliminate or prevent as many accident initiators and accident consequences as possible. Any remaining plausible accident initiators and consequences are dealt with appropriate combinations of active and passive safety systems. In water-cooled SMRs, the integration of steam generators and pressurizers within the reactor vessel eliminates large-diameter pipes and penetrations in the reactor vessel, thereby reducing substantially the risk of LOCAs. Moreover, in some designs the application of in- vessel control rod drives eliminates the risk of inadvertent control rod ejections that lead to reactivity insertion accidents. Loss of coolant accidents may also be prevented with compact loop designs that employ short piping and fewer connections between components (Kuznetsov, 2009).¶ In HTGRs, the fuel particles consist of fissionable fuel kernels with tri-structural isotropic (TRISO) coating.19 The TRISO coating system constitutes a miniature pressure vessel that is capable of containing the readionuclides and gases generated by fission of the nuclear material in the kernel. One of the coating layers consists of silicon carbide (a strong refractory material) which can retain radionuclides at extremely high temperatures under all accident conditions—temperatures can remain at 1600°C for several hundred hours without loss of particle coating integrity. Furthermore, the graphite holding the TRISO-coated particles together can withstand even higher temperatures without structural damage.20 And the massive graphite structures in the core create an extremely large heat capacity. The combination of large thermal margins, low power density of the core, and relatively large length-to-diameter ratio of the core, allow for very slow and stable response to transients caused by initiating events and for passive heat removal (INL, 2011).¶ The effectiveness of passive safety features can be illustrated by comparing outcomes from probabilistic risk analysis (PRA). In 1991, a Level-2 PRA was developed for the EBR-II fast neutron spectrum experimental breeder reactor—a 21 MWe plant—to compare its operational risk to that of commercial LWR‘s for which PRA‘s were available. EBR-II employs an extensive array of passive and inherent safety measures to back up traditional active safety systems. This PRA exercise showed that for EBR-II the risk of simply violating a fuel pin technical specification (with no core damage) is less than the risk of significant core disruption for the LWRs of the time. The point of the PRA comparisons is that application of passive and inherent safety measures as incorporated in SMRs can help to overcome the increase in numbers of SMRs needed to deliver the same societal energy provided by a smaller number of large-sized LWRs. Similarly, preliminary Level-1 PRA results for the NuScale Power Reactor indicate a total single-module mean CDF of 2.8x10-8/reactor-year, well below that of existing nuclear plants. And for the VK-300, the probability of severe core damage has been estimated to be less than 2.0x10-8/reactor-year (Hill et al, 1998; Kuznetsov and Gabaraev, 2007; Modarres, 2010).¶ SMRs have a smaller fuel inventory and thus a reduced source term. So on top of reduced hazard of core damage, the hazard attendant to release of radioactivity is also reduced per deployed SMR. The combination of reduced probability of core damage failure, a reduced source term, and additional fission product release barriers, could offer major advantages for emergency planning and response.

**SMRs are good to go- Plan quickly resolves any remaining issues**

Adams 2010 (Rod Adams, nuclear power expert with experience designing and operating small nuclear reactors and a former Submarine Engineer Officer, March 23, 2010, “Small Modular Reactors Could Be An American Export – But We Need to Move Faster,” Atomic Insights, http://atomicinsights.com/2010/03/small-modular-reactors-could-be-an-american-export-but-we-need-to-move-faster.html)

In the March 23, 2010 issue of the Wall Street Journal, Dr. Steven Chu published an op-ed piece titled America’sNew Nuclear Option that describes the Administration’s growing interest in smaller nuclear energy systems that can be produced in factories and delivered nearly complete to sites around the country and around the world. Here is a quote from that editorial:¶ As this paper recently reported, one of the most promising areas is small modular reactors (SMRs). If we can develop this technology in the U.S. and build these reactors with American workers, we will have a key competitive edge.¶ Small modular reactors would be less than one-third the size of current plants. They have compact designs and could be made in factories and transported to sites by truck or rail. SMRs would be ready to “plug and play” upon arrival.¶ If commercially successful, SMRs would significantly expand the options for nuclear power and its applications. Their small size makes them suitable to small electric grids so they are a good option for locations that cannot accommodate large-scale plants. The modular construction process would make them more affordable by reducing capital costs and construction times.¶ Their size would also increase flexibility for utilities since they could add units as demand changes, or use them for on-site replacement of aging fossil fuel plants.¶ Those are some terrific words, but the message loses some of its impact when the numbers are revealed later down the page. In the 2011 budget, the Administration requested just $39 million for a program aimed specifically at small reactors. That amount of money would not even pay for the Nuclear Regulatory Commission costs of reviewing the license for a single nuclear energy system design certification. In an agency whose total budget request is in excess of $28,000 million ($28 billion), a $39 million line item gets lost in the decimal dust.¶ There is an old saying that is appropriate here – “For where your treasure is, there your heart will be also”. The effort by Dr. Chu to publish a piece favorable to small nuclear energy systems in the Wall Street Journal is commendable, but the tiny slice of resource support indicates that there is still a lot of work to be done to enable the technology to reach the market, especially when compared to the massive number of dollars available for industrial wind deployment as a gift from taxpayers to companies like BP, Chevron, GE, FPL, and Siemens.¶ It is beyond comprehension to me that it will take us “about 10 years” (in Dr. Chu’s words) to license and deploy smaller, light water reactors that use essentially the same technology that we have been using successfully for nearly 60 years. We have the knowledge base and the manufacturing capability now; we should build several plants in controlled locations so we can show the regulators how their safety systems work to keep the public protected.¶ Dr. Chu’s op-ed piece concludes with some additional good words about the future potential of systems using high temperature gas – one of my favorites – and fast neutrons for better fuel economy plus the use of modern modeling and simulation techniquest. Dr. Chu’s head is in the right place, but he could use some encouragement to move more aggressively to take advantage of what is currently an American strong suit.¶ There are some Americans who know more than anyone else about what it takes to build durable, safe, secure, small reactors that use light water as a heat transfer and moderating fluid and steam as the power section working fluid. We can improve the economics through well understood principles of series production. The Department of Energy’s budget request for FY2011 currently includes more than $1,000 million for small, light water reactors whose allowed market is limited to military vessels. It would seem that technologies used in that program could be used as the basis for prototype licenses for systems like the mPowerTM and NuScale in a process that could take far less than 10 years.¶ There are several places in the US (Hawaii, Guam, Puerto Rico and Alaska) where early adoption of such systems could dramatically reduce the cost of electricity, reduce the dependence on a fragile fossil fuel tether, and improve its production cleanliness. Success in those locations could lead to successes in similar markets around the world and perhaps even in system refinements allow competitive costs in more traditional electrical power production markets. What are we waiting for?