## 1AC

### 1AC – Hegemony Advantage

#### CONTENTION 1: HEGEMONY

#### Mobile SMRs allow the Marines to reduce logistics tail---other energies fail

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Operational Vulnerability. Operational energy use represents a second serious vulnerability for the U.S. military. In recent years, the military has become significantly more effective by making greater use of technology in the field. The price of this improvement has been a vast increase in energy use. Over the last 10 years, for instance, the Marine Corps has more than tripled its operational use of energy. Energy and water now make up 70 percent of the logistics burden for troops operating in forward locations in the wars in Afghanistan and Iraq. This burden represents a severe vulnerability and is costing lives. In 2006, troop losses from logistics convoys became so serious that Marine Corps Major General Richard Zilmer sent the Pentagon a “Priority 1” request for renewable energy backup.11 This unprecedented request put fuel convoy issues on the national security agenda, triggering several high-level studies and leading to the establishment of the Power Surety Task Force, which fast-tracked energy innovations such as mobile power stations and super-insulating spray foam. Currently, the Marine Corps is considering a goal of producing all nonvehicle energy used at forward bases organically and substantially increasing the fuel efficiency of vehicles used in forward areas.¶ Nevertheless, attempts to solve the current energy use problem with efficiency measures and renewable sources are unlikely to fully address this vulnerability. Wind, solar, and hydro generation along with tailored cuts of energy use in the field can reduce the number of convoys needed to supply troops, but these measures will quickly reach limits and have their own challenges, such as visibility, open exposure, and intermittency. Deploying vehicles with greater fuel efficiency will further reduce convoy vulnerability but will not solve the problem.¶ A strong consensus has been building within planning circles that small reactors have the potential to significantly reduce liquid fuel use and, consequently, the need for convoys to supply power at forward locations. Just over 30 percent of operational fuel used in Afghanistan today goes to generating electricity. Small reactors could easily generate all electricity needed to run large forward operating bases. This innovation would, for instance, allow the Marine Corps to meet its goal of self sufficient bases. Mobile reactors also have the potential to make the Corps significantly lighter and more mobile by reducing its logistics tail.¶ Another way that small reactors could potentially be used in the field is to power hydrogen electrolysis units to generate hydrogen for vehicles.12 At forward locations, ground vehicles currently use around 22 percent imported fuel. Many ground transport vehicles can be converted to run on hydrogen, considerably reducing the need for fuel convoys. If the wars in Iraq and Afghanistan are indicative of future operations, and fuel convoys remain a target for enemy action, using small reactors at forward locations has the potential to save hundreds or thousands of U.S. lives.

#### Marine SMRs key to battlefield mobility and stealth

Schaffer and Chang 9 Marvin Baker, Adjunct staff Member at the RAND Corporation and Ike, independent consultant, “Mobile Nuclear Power for Future Land Combat”, issue 52, 1st quarter 2009, PDF Online

In this article, we introduce the concept of survivable, non–fossil fuel powerplants that can be transported to remote theaters of operation. Our rationale arises from a sense of urgency for countering two emerging threats facing land forces today: the increasing cost and vulnerability of fossil fuel extraction, refining, and distribution systems; and worldwide proliferation of highly accurate weapons launched at long standoff ranges. Our vision spotlights nuclear energy for expeditionary U.S. Army and Marine Corps forces as opposed to sea and air because the Navy is already largely nuclear and because substantial Air Force fuel improvements face unresolved technology issues.¶ Our notion of land force energy survivability derives from mobility and stealth. Mobility is key in that it permits evasion of attack by coordinate-guiding weapons. Mobility also allows serving widely dispersed forces without reliance on extended power grids, fixed storage facilities, and processing plants. To complement mobile energy, we focus on land vehicles that use hydrogen fuel and electricity for power.¶ Transportable, mobile powerplants permit manufacture of hydrogen in theater and recharging of vehicular batteries in the field. We envision transportability by ship, barge, cargo aircraft, or airship, and theater mobility by tractor trailer truck, railroad flatcar, cargo aircraft, or airship.¶ Modern armies require copious amounts of energy to conduct their operations. Energy is consumed as fuel for a variety of vehicles and as electricity for illumination, communication, computing, food processing, and environmental heating and cooling. Modern military forces also are more often called upon to provide humanitarian relief in the form of electricity for civilian populations. Taken together, these energy demands argue for affordable, reliable, and survivable power under combat stress and emergency conditions.¶ The outlook, however, is not promising regarding any of these issues. Due to dwindling reserves of reliable, inexpensive oil and competing worldwide demand, fuel costs have already begun to skyrocket, and responsible economists and geologists predict that they will go significantly higher. Moreover, proliferation of guided bombs and missiles threatens to make stationary refineries, powerplants, storage vessels, generators, and power grids prime targets with low expected survivability in future regional conflicts.¶ Overwhelming reliance on foreign oil poses an additional dilemma. The entire national security system, including the political leadership, military forces, and Intelligence Community, relies on fossil fuel to operate. With 95 percent of proven oil reserves controlled outside of North America, 1 this poses a national risk that is monotonically increasing.¶ To an alarming extent, then, the future has already arrived. Intensive study, planning, and early action to resolve this dilemma are warranted.¶ Motivation¶ The debilitating economic impact of $100+ per barrel for oil and $4+ per gallon for gasoline on the U.S. civilian population is well known. Such prices undermine military operations as well. U.S. forces currently consume 340,000 barrels of oil daily, 1.5 percent of all the oil used in the country. 2 In 2006, the Department of Defense (DOD) energy bill was $13.6 billion, 25 percent higher than the year before. Petroleum costs have subsequently increased more than 50 percent. In its latest budget request, the White House added a $2 billion surcharge for rising fuel costs. It is conceivable that in coming decades, petroleum and natural gas will be so expensive that fuel will impinge on vehicular-intensive training exercises and on the acquisition of advanced equipment.¶ The U.S. military must find a viable substitute for fossil fuel. Fuel abundance is critical on the battlefield since it enables maneuverability. It is well recognized that lack of fuel can impose severe limitations on operations. There are numerous historical examples:¶ - George Patton’s 1944 drive for Germany stalled because Dwight Eisenhower had to divert fuel to British forces under Bernard Montgomery.¶ - As a consequence of interdiction in the Mediterranean Sea, German forces under Erwin Rommel literally ran out of gas in their 1943 North Africa campaign.¶ - The 1944 drive by U.S. forces up the Rhone Valley in France was slowed by fuel shortages.¶ - The Luftwaffe was grounded late in World War II due to lack of fuel.¶ - Because of fuel scarcity, German pilots were sent into combat in the last 9 months of World War II with only a third of the training hours actually required.¶ Wartime survivability of infrastructure for fuel extraction, manufacturing, and distribution has reached a critical state with the worldwide proliferation of satellite guided standoff missiles and bombs. As a case in point, Russia recently introduced the Kh-38MK air-to-surface missile. It uses GLONASS (Global Navigation Satellite System) satellite navigation, equivalent to global positioning system (GPS) with accuracy of better than 35 feet, and has a standoff range of 25 miles. 3 More ominously, threats with longer range also exist, typically 5,000 to 8,000 miles for intercontinental and submarine-launched ballistic missiles, 700 miles for cruise missiles, and 400 miles for short-range ballistic missiles. 4 Currently, most of these systems employ comparatively inaccurate inertial guidance, but many are being upgraded to satellite navigation with performance equivalent to the Kh-38MK.¶ Since attack missile warheads have damage areas of 5,000 to 7,500 square feet, we can estimate the benefits of random movement for a mobile reactor. Calculations are summarized in figure 1, in which damage probability is plotted against displacement. When the displacement is 0, the damage probability is more than 0.9. However, when the displacement is 600 feet or more, the damage probability is less than 0.009 for either warhead extreme.¶ Clearly, mobility acts as a powerful countermeasure against coordinate-guiding munitions. Recent history reinforces the premise:¶ - During the first Gulf War (Operation Desert Storm), the only Iraqi Scud missiles that survived the U.S. air assault were of the mobile (wheeled) variety. These missiles later rained on Tel Aviv and Saudi Arabia.¶ - A 1991 study by Air Force Chief of Staff General Merrill McPeak revealed the challenge of targeting mobile targets: “Efforts to suppress Iraqi launches of Scud missiles during Desert Storm ran into problems. Mobile launchers proved remarkably elusive and survivable. Objects targeted were impossible to discriminate from decoys (and clutter) with radar and infrared sensors.”5¶ - In the 2006 war in Lebanon, the Israeli air force could not stop more than 1,000 Hizballah truck-mobile rockets from striking Israeli urban areas.¶ Abundance of fuel is critical for success in big and small wars. U.S. forces in Iraq consume 1,680,000 gallons daily. The famous flanking maneuver during Operation Desert Storm burned 4.5 million gallons of fuel per day. After 5 days of combat, the maneuver required 70,000 tons of fuel.¶ 6 Prudence dictates development of abundant military power sources that are survivable, independent of petroleum, and require little fixed infrastructure to serve dispersed forces.

#### Mobility’s key to overall deterrence and all conflict de-escalation

Hickins 9 COLONEL KENNETH, United States Army, March 30, “STRATEGIC MOBILITY: FORGOTTEN CRITICAL REQUIREMENT OF THE CONTEMPORARY OPERATIONAL ENVIRONMENT”, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA494718

As I stated at the beginning of the paper, Strategic Mobility has not been fixed and is the weakest link in the strategic chain of getting the right forces, to the proper place in space and time in order to allow the Combatant Commander to either deter, deescalate, or decisively defeat an adversary. I believe I have shown that the 2006 QDR which stated, “Extensive investments in cargo transportability, strategic lift, and prepositioned stocks over the past decade have yielded military forces capable of responding to a broad spectrum of security challenges worldwide”, 41 is at best misleading and at worst wishful thinking of the highest order. ¶ Eighty percent of all countries border on the coast, 80 percent of the world’s capitals lie within 350 miles of the coast, and 95 percent of all the world’s population lives within 500 miles of the coast. 42 Currently, the United States cannot move significant ground forces to a crisis area in a timely manner. The recent National Security Strategy states that either Host Nation or an Allied Nation APODs and SPODs will be used to quickly move forces into the crisis area. An examination of past and potential crisis areas reveal most border the world’s oceans and are in remote, unimproved areas of the world: Somalia, Iraq, Iran, Israel, Yemen, Myanmar, Pakistan, India, Sierra Leone, Sri Lanka, China, Korea, Taiwan, Georgia, Sudan, East Timor, Venezuela, and Cuba. Half of these countries sit astride strategic waterways that would impact the United States and our Allies.¶ If the United States would have to engage any of these countries militarily, the Combatant Commander would need all the assets that the Mobility Triad has in order to respond to any and all contingencies. If the United States wants to continue to provide the world with political, economic, informational, and military leadership it will need to have the ability to flow military forces into the numerous trouble spots throughout the world.¶ The United States cannot afford to rely on possible Host Nation or Allied Nation support. Nor can it rely on limited air transport and slow sealift to get our forces quickly to the crisis area. The United States must quit paying lip service to the shortfalls in our Strategic Mobility Triad and leverage the available technology and create a truly interdependent and complimentary Mobility Triad that is a critical requirement for any operational and strategic success.

#### Mobile energy security’s key to mission effectiveness

Voth 12 Jeffrey M, President of Herren Associates leading a team of consultants advising the federal government on issues of national security, energy and environment, health care and critical information technology infrastructure, George Washing University Homeland Security Policy Institute, “In Defense of Energy – A Call to Action”, April 11, <http://securitydebrief.com/2012/04/11/in-defense-of-energy-a-call-to-action/>

Last month, the Pentagon released its widely anticipated roadmap to transform operational energy security. As published in a World Politics Review briefing, energy security has become a strategic as well as an operational imperative for U.S. national security. As tensions continue to escalate with Iran in the Strait of Hormuz, it has become clear that the U.S. military urgently requires new approaches and innovative technologies to improve fuel efficiency, increase endurance, enhance operational flexibility and support a forward presence for allied forces while reducing the vulnerability inherent in a long supply-line tether. Assured access to reliable and sustainable supplies of energy is central to the military’s ability to meet operational requirements globally, whether keeping the seas safe of pirates operating off the coast of Africa, providing humanitarian assistance in the wake of natural disasters in the Pacific or supporting counterterrorism missions in the Middle East. From both a strategic and an operational perspective, the call to action is clear. Rapid employment of energy-efficient technologies and smarter systems will be required to transform the military’s energy-security posture while meeting the increasing electric-power demands required for enhanced combat capability. As recently outlined by Chairman of the Joint Chiefs of Staff Gen. Martin Dempsey, “Without improving our energy security, we are not merely standing still as a military or as a nation, we are falling behind.”

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

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

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

#### Marine mobility’s key to effective response in Afghanistan, Pakistan and protecting SLOCs

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Preparing for Greater Challenges ¶ The transitions in the world’s economic and power structure laid out above provide clear indications of the Corps’ likely future role and the frugal calculus that is required to avoid further depleting national resources. The Corps must continue to be an expeditionary force capable of operating across the spectrum of war, but likely developments suggest key areas of focus. Afghanistan will require small wars skills in the near term, which must be retained to deal with the effects of socioeconomic transition kindled into proxy wars by regional powers or transnational movements. Additionally, the Corps will continue to have equity in theater functional and contingency plans, especially humanitarian assistance/disaster relief and noncombatant evacuation operations. State collapse in Pakistan has been highlighted as a likely scenario in the near term, which would call on many of the above skills,14 but beyond securing nuclear material, strategic calculus dictates an extremely cautious approach to what would be a much more taxing entanglement than either Iraq or Afghanistan. Looking past these requirements, the Corps must orient itself on the challenge in the Indo-Pacific, which requires a frugal, truly expeditionary, and adaptive force capable of operating in the face of robust and asymmetric threats. In particular, the antiaccess threats and multiple chokepoint straits in the region require a Corps capable of establishing and defending advanced bases near key ports and sea lanes, operating in a distributed and maneuverable manner in high-threat environments, and maintaining the tempo of its operations in the face of jamming and defeat of communications and intelligence systems, including space-based systems. While other Services will seek high-end technological solutions, the Marine Corps should pursue intelligent capabilities and doctrines more likely to be sustainable over time and in the face of future conflict. ¶ The Nation and the Corps can best maintain access, build equity, and gain insight into the region through security cooperation and engagement over the next 5 to 10 years. Near the end of that period, small wars capabilities will likely be called for again as regional powers seek to gain influence by proxy in lower end conflicts. America, however, should judiciously avoid staking her prestige on state-building projects based on the ideology of democracy promotion. Involvement and objectives should be carefully circumscribed to serve key interests and conserve power for more significant challenges on the horizon. ¶ The likelihood of significant conflict will begin to rise somewhere around 2020, growing into midcentury. The United States will face the proliferation of strategic antiaccess weapons to regional powers and precision antiship and improved surface-to-air missile systems to virtually all threat states and many nonstate actors. While China is pursuing late-generation capabilities and attempting to expand her influence across the theater, strategists recognize that they are still well behind American capabilities. For this reason, influential analysts promote an emphasis on “informationalized” and space weapons to create a nonlinear and “noncontact” threat well past the first island chain, as well as “attack capabilities for battle operations on exterior lines.” This line of thinking seeks to outflank American air capabilities by building a “powerful navy that possesses relative space superiority,”15 while attacking air bases with ballistic missiles and aircraft carriers with the recently fielded Dong-Feng-21D (CSS–5 Mod–4) “carrier killer” missile system. For full effect, these systems require integration with over-the-horizon intelligence, surveillance, and reconnaissance systems that, once combined and fielded in sufficient numbers, pose a significant threat to U.S. assets in the Pacific and may overwhelm antiballistic missile defenses through sheer numbers. While some analysts feel these threats currently fall short of their advertised capabilities, the fielding of the CSS–5 Mod–4 was “much earlier than expected,”16 giving China years to improve before conflict is likely. What’s more, China need not achieve global parity with the United States to achieve its regional goals. ¶ In the face of likely threats and threat intentions, the Corps should focus on several capabilities. The antiaccess missile threat demands the ability to distribute forces, particularly aviation assets and naval support facilities, to multiple forward locations in the case of conflict. The Corps must be prepared to secure, defend, and operate from austere advanced bases, continuing to develop operational maneuver and distributed operations capabilities in order to project and disperse combat power. This capability must include the rapid movement of aviation assets and their ability to operate on short, unimproved, and rapidly repaired runways without ponderous support requirements. The importance and channelized nature of SLOCs in the Indo-Pacific requires a focus on rapidly securing their land flanks, particularly in straits and in the face of mobile surface-to-air and antiship missiles and swarming small boat tactics with the possibility of suicide attacks. When considering such threats, the Corps and the Nation should recognize that the kamikaze threat was swarming and asymmetric, but the stakes of the conflict merited accepting it. Finally, the Corps must account for the defense of islands and straits against future, if less capable, amphibious threats.

#### Pakistan collapse cause global nuclear conflict

Pitt 9 William, a New York Times and internationally bestselling author of two books: "War on Iraq: What Team Bush Doesn't Want You to Know" and "The Greatest Sedition Is Silence”, 5/8/09, “Unstable Pakistan Threatens the World,” http://www.arabamericannews.com/news/index.php?mod=article&cat=commentary&article=2183

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

#### Afghan instability causes nuclear war

Carafano 10 James Jay is a senior research fellow for national security at The Heritage Foundation and directs its Allison Center for Foreign Policy Studies, “Con: Obama must win fast in Afghanistan or risk new wars across the globe,” Jan 2 <http://gazettextra.com/news/2010/jan/02/con-obama-must-win-fast-afghanistan-or-risk-new-wa/>

We can expect similar results if Obama’s Afghan strategy fails and he opts to cut and run. Most forget that throwing South Vietnam to the wolves made the world a far more dangerous place. The Soviets saw it as an unmistakable sign that America was in decline. They abetted military incursions in Africa, the Middle East, southern Asia and Latin America. They went on a conventional- and nuclear-arms spending spree. They stockpiled enough smallpox and anthrax to kill the world several times over. State-sponsorship of terrorism came into fashion. Osama bin Laden called America a “paper tiger.” If we live down to that moniker in Afghanistan, odds are the world will get a lot less safe. Al-Qaida would be back in the game. Regional terrorists would go after both Pakistan and India—potentially triggering a nuclear war between the two countries. Sensing a Washington in retreat, Iran and North Korea could shift their nuclear programs into overdrive, hoping to save their failing economies by selling their nuclear weapons and technologies to all comers. Their nervous neighbors would want nuclear arms of their own. The resulting nuclear arms race could be far more dangerous than the Cold War’s two-bloc standoff. With multiple, independent, nuclear powers cautiously eyeing one another, the world would look a lot more like Europe in 1914, when precarious shifting alliances snowballed into a very big, tragic war. The list goes on. There is no question that countries such as Russia, China and Venezuela would rethink their strategic calculus as well. That could produce all kinds of serious regional challenges for the United States. Our allies might rethink things as well. Australia has already hiked its defense spending because it can’t be sure the United States will remain a responsible security partner. NATO might well fall apart. Europe could be left with only a puny EU military force incapable of defending the interests of its nations.

#### Afghan collapse on brink—2014 will see total disintegration

IWPR 2/5--Institute for War and Peace Reporting, Existential Fears in Afghanistan, Abdol Wahed Faramarz, 2013, ARR Issue 448, http://iwpr.net/report-news/existential-fears-afghanistan

As the end date for the NATO combat troop presence approaches, some experts in Afghanistan fear their country will not withstand external pressures and could even disintegrate. ¶ Last month, Ashraf Ghani Ahmadzai, a former central banker who now heads the commission in charge of the security transition, told a private Afghan TV station that the next ten years would be a massive challenge.¶ "We face dangers to the survival of our nationhood in 2014,” he said in a January 5 interview. “Our neighbours, as well as some international commentators and others who do not hold us in high esteem, are waiting for a collapse."¶ In January, Afghanistan’s former intelligence chief Amrullah Saleh, issued dire predictions about his country’s post-2014 future. In interviews for the BBC in English and Pashtu, he warned of immediate threats posed by Pakistan and Iran.¶ Interviewed by the BBC’s Frank Gardner, Saleh said the West would “regret it one day” if it failed to “persuade, pressure or convince Pakistan to give up extremist militancy as tool for promotion of its foreign policy”.¶ For Afghans, he said, the result would be that “a lot of us will be killed, perhaps hundreds of thousands of people displaced. There will be images of an Afghanistan sinking into chaos, an Afghanistan not able to provide services for its population.”¶ Some politicians like parliamentarian Mohammad Hussein Fahimi argue that the influence of both Tehran and Islamabad already extends far inside Afghanistan, into the heart of government. Fahimi told IWPR that this leverage allowed these states to press home their advantage whenever they sensed that the Afghan leadership was vacillating.¶ Apart from the continuing Taleban insurgency, local analysts point to internal strains within central institutions including government, parliament and the security forces, with many politicians still more attached to old political and ethnic allegiances than to the nation state.¶ For some, the future is beginning to look alarmingly like the civil war period of the early 1990s.¶ Abdul Latif Pedram, leader of the National Congress Party, fears a resurgence in warlords reigning over mini-states within Afghanistan and engaging in conflict with neighbouring factions.¶ "Increasing tribal, ethnic, factional and regional prejudice presents a major risk that our nationhood will be destroyed,” he said. “Whenever Afghan politicians, rulers and leaders appear before the media, they mask their true faces behind talk of national unity, and behind claims that the Afghans are one united nation with no ethnic differences among them. But when they return to their homes, they talk of tribe and tribalism, race and racism."

#### Marines independently key to overall US power projection

Hagee 4 General Michael W, Commandant of the Marine Corps, "Before the Senate Armed Services Committee Concerning Posture", February 10, www.au.af.mil/au/awc/awcgate/usmc/posture\_feb04.pdf

The Navy-Marine Corps team continues to play a critical role in the Global War On Terrorism and in the establishment of stability and security throughout the world. During this past year, the Marine Corps, both active and reserve, was engaged in operations from Afghanistan, to the Arabian Gulf, the Horn of Africa, Liberia, the Georgian Republic, Colombia, Guantanamo Bay, and the Philippines. Most prominent in highlighting the value and power of the Nation’s naval expeditionary capability was the Marine Corps’ participation in Operation IRAQI FREEDOM. Success in this operation underscored the unique contributions of our multidimensional naval dominance, our expeditionary nature, our flexibility to deal with complex situations and challenges, and the adaptability of our forces and individuals in order to defeat the challenges posed by adaptive, asymmetric enemies and long-term threats. ¶ Early last year, the I Marine Expeditionary Force deployed a combat ready force of almost 70,000 Marines and Sailors in less than 60 days using the full array of our complementary power projection capabilities. Forward deployed Marine Expeditionary Units (Special Operations Capable) again demonstrated their proven value for immediate response. Eleven strategically located Maritime Prepositioned Force ships were unloaded in 16 days to provide the equipment and sustainment for two Marine Expeditionary Brigades. A seven ship amphibious force from each coast embarked a total of 11,500 Marines, Sailors, and their equipment and within thirty days these fourteen ships began to arrive and offload in Kuwait. Strategic sea and air lift was also vital to our success in this effort. Exploiting the operational speed, reach, and inherent flexibility of seapower, the Navy-Marine Corps team achieved a rapid buildup of sustained warfighting power that was combat ready to support U.S. Central Command on 1 March 2003. ¶ Closely integrated with our joint and coalition partners, as well as Special Operations Forces, the I Marine Expeditionary Force provided the Combatant Commander with a potent combined arms force comprising a balance of ground, aviation, and combat service support elements all coordinated by a dynamic command element. This teamwork – the product of demanding and realistic Service and joint training – presented a multi-dimensional dilemma for the Iraqi regime’s forces and loyalists. It also greatly increased the range of options available to our leadership as they addressed each unique and complex situation. The integration of the 1st United Kingdom Division within the I Marine Expeditionary Force provides outstanding lessons for achieving merged coalition capabilities and consistent goals in the future. ¶ The combat power of I Marine Expeditionary Force generated an operational tempo that our enemy could not match. With short notice that operations would commence early, the Marines and their joint and coalition partners rapidly secured key strategic objectives. The I Marine Expeditionary Force then engaged in 26 days of sustained combat operations. Using the tenets of maneuver warfare, they executed four major river crossings, fought ten major engagements, and destroyed eight Iraqi divisions before stopping in Tikrit – almost 500 miles inland. In support of Joint Special Operations Forces Northern Iraq, the 26th Marine Expeditionary Unit inserted a Marine-Air Ground Task Force from the Eastern Mediterranean into Northern Iraq – almost 1,200 miles distance. The sustained resources of the Marine force, which were derived primarily from our seaborne logistics, provided us unrivaled advantages. While our logistics were stretched by the operational commanders, our combat service support units demonstrated flexibility and resourcefulness. ¶ Highlighting the expeditionary mindset of Marines, our combined arms force successfully operated in desert, urban, swamp, and rural environments while effectively conducting combat, peacekeeping, and humanitarian operations – at times simultaneously. Marines also demonstrated the ability to re-task and reorganize to conduct unanticipated missions like the taking of the city of Tikrit. Following major combat operations, I Marine Expeditionary Force assumed responsibility for security and stability in five Central Iraq provinces until they were relieved of the last province by coalition forces this past September. Flexibility and adaptability are key characteristics of an expeditionary force, and they are critical advantages that we must seek to optimize for the future, particularly in this era of global uncertainty. ¶ Recent operations also emphasize the increased importance of access to key regions for projecting our Nation’s power. With global interests, the United States must retain the capability to secure access as needed. Power projection from the sea greatly increases the range of options available to avert or resolve conflicts. A credible naval forcible-entry capability is critical to ensure that we are never barred from a vital national objective or limited to suboptimal alternatives.

#### Extinction

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

Events in Libya are a further reminder for Americans that we **stand at a crossroads in our continuing evolution as the world's** sole full-service superpower. Unfortunately, we are increasingly seeking change without cost, and shirking from risk because we are tired of the responsibility. We don't know who we are anymore, and our president is a big part of that problem. Instead of leading us, he explains to us. Barack Obama would have us believe that he is practicing strategic patience. But many experts and ordinary citizens alike have concluded that he is actually beset by strategic incoherence -- in effect, a man overmatched by the job. It is worth first examining the larger picture: We live in a time of arguably **the greatest structural change in the global order yet endured**, with this historical moment's most amazing feature being its relative and absolute lack of mass violence. That is something to consider when Americans contemplate military intervention in Libya, because if we do take the step to prevent larger-scale killing by engaging in some killing of our own, we will not be adding to some fantastically imagined global death count stemming from the ongoing "megalomania" and "evil" of American "empire." We'll be engaging in the same sort of system-administering activity that has marked our stunningly successful stewardship of global order since World War II. Let me be more blunt: As the **guardian of globalization**, the U.S. military has been the greatest force for peace the world has ever known. Had America been removed from the global dynamics that governed the 20th century, the **mass murder never would have ended**. Indeed, it's entirely conceivable **there would now be** no identifiable human civilization left**, once** nuclear weapons **entered the killing equation.**  But the world did not keep sliding down that **path of perpetual war**. Instead, America stepped up and changed everything by **ushering in our now-**perpetual great-power peace. We introduced the **international liberal trade order known as** globalization and played loyal Leviathan over its spread. What resulted was the collapse of empires, an explosion of democracy, the persistent spread of human rights, the liberation of women, the doubling of life expectancy, a roughly 10-fold increase in adjusted global GDP and a **profound and persistent reduction in** battle deaths from state-based conflicts. That is what American "hubris" actually delivered. Please remember that the next time some TV pundit sells you the image of "unbridled" American military power as the cause of global disorder instead of its cure. With self-deprecation bordering on self-loathing, we now imagine a post-American world that is anything but. Just watch who scatters and who steps up as the Facebook revolutions erupt across the Arab world. While we might imagine ourselves the status quo power, we remain the world's most vigorously revisionist force. As for the sheer "evil" that is our military-industrial complex, again, let's examine what the world looked like before that establishment reared its ugly head. The last great period of global structural change was the first half of the 20th century, a period that saw a death toll of about 100 million across two world wars. That comes to an average of 2 million deaths a year in a world of approximately 2 billion souls. Today, with far more comprehensive worldwide reporting, researchers report an average of less than 100,000 battle deaths annually in a world fast approaching 7 billion people. Though admittedly crude, these calculations suggest a 90 percent absolute drop and a 99 percent relative drop in deaths due to war. We are clearly headed for a world order characterized by multipolarity, something the American-birthed system was designed to both encourage and accommodate. But given how things turned out the last time we collectively faced such a fluid structure, we would do well to keep U.S. power, in all of its forms, deeply embedded in the geometry to come. To continue the historical survey, after salvaging Western Europe from its half-century of civil war, the U.S. emerged as the progenitor of a new, far more just form of globalization -- one based on actual free trade rather than colonialism. America then successfully replicated globalization further in East Asia over the second half of the 20th century, setting the stage for the Pacific Century now unfolding.

### 1AC – Rapid Response Advantage

#### CONTENTION 2: RAPID RESPONSE

#### Mobile SMRs spur effective desalination and disaster relief

Pfeffer and Macon 2 Robert A, physical scientist at the Army Nuclear and Chemical Agency in Springfield, Virginia, working on nuclear weapons effects, a graduate of Trinity University and has a master's degree in physics from The Johns Hopkins University and William A, project manager at the Nuclear Regulatory Commission, formerly the acting Army Reactor Program Manager at the Army Nuclear and Chemical Agency, "Nuclear Power: An Option for the Army's Future", Jan 16 2002 is last date modified, [www.almc.army.mil/alog/issues/SepOct01/MS684.htm](http://www.almc.army.mil/alog/issues/SepOct01/MS684.htm)

The idea of using nuclear power to produce synthetic fuels, originally proposed in 1963, remains feasible today and is gaining significant attention because of recent advances in fuel cell technology, hydrogen liquefaction, and storage. At the same time, nuclear power has become a significant part of the energy supply in more than 20 countries—providing energy security, reducing air pollution, and cutting greenhouse gas emissions. The performance of the world's nuclear power plants has improved steadily and is at an all-time high. Assuming that nuclear power experiences further technological development and increased public acceptance as a safe and efficient energy source, its use will continue to grow. Nuclear power possibly could provide district heating, industrial process heating, desalination of seawater, and marine transportation.¶ Demand for cost-effective chemical fuels such as hydrogen and methanol is expected to grow rapidly. Fuel cell technology, which produces electricity from low-temperature oxidation of hydrogen and yields water as a byproduct, is receiving increasing attention. Cheap and abundant hydrogen eventually will replace carbon-based fuels in the transportation sector and eliminate oil's grip on our society. But hydrogen must be produced, since terrestrial supplies are extremely limited. Using nuclear power to produce hydrogen offers the potential for a limitless chemical fuel supply with near-zero greenhouse gas emissions. As the commercial transportation sector increasingly moves toward hydrogen fuel cells and other advanced engine concepts to replace the gasoline internal combustion engine, DOD eventually will adopt this technology for its tactical vehicles.¶ The demand for desalination of seawater also is likely to grow as inadequate freshwater supplies become an urgent global concern. Potable water in the 21st century will be what oil was in the 20th century—a limited natural resource subject to intense international competition. In many areas of the world, rain is not always dependable and ground water supplies are limited, exhausted, or contaminated. Such areas are likely to experience conflict among water-needy peoples, possibly prompting the deployment of U.S. ground forces for humanitarian relief, peacekeeping, or armed intervention. A mobile desalination plant using waste heat from a nuclear reactor could help prevent conflicts or provide emergency supplies of freshwater to indigenous populations, and to U.S. deployed forces if necessary.¶ Promising Technology for Tomorrow¶ Compact reactor concepts based on high-temperature, gas-cooled reactors are attracting attention worldwide and could someday fulfill the role once envisioned for the energy depot. One proposed design is the pebble bed modular reactor (PBMR) being developed by Eskom in South Africa. Westinghouse, BNFL Instruments Ltd., and Exelon Corporation currently are supporting this project to develop commercial applications.¶ A similar design is the remote site-modular helium reactor (RS-MHR) being developed by General Atomics. If proven feasible, this technology could be used to replace retiring power plants, expand the Navy's nuclear fleet, and provide mobile electric power for military or disaster relief operations. Ideally, modular nuclear power plants could be operated by a small staff of technicians and monitored by a central home office through a satellite uplink.¶ The technology of both the PBMR and the RS-MHR features small, modular, helium-cooled reactors powered by ceramic-coated fuel particles that are inherently safe and cannot melt under any scenario. This results in simpler plant design and lower capital costs than existing light water reactors. The PBMR, coupled with a direct-cycle gas turbine generator, would have a thermal efficiency of about 42 to 45 percent and would produce about 110 megawatts of electricity (MWe). The smaller RS-MHR would produce about 10 to 25 MWe, which is sufficient for powering remote communities and military bases. Multiple modules can be installed on existing sites and refueling can be performed on line, since the fuel pebbles recycle through the reactor continuously until they are expended. Both designs also feature coolant exit temperatures high enough to support the thermochemical water-splitting cycles needed to produce hydrogen.¶ For military applications, RS-MHR equipment could be transported inland by truck or railroad, or single modules could be built on barges and deployed as needed to coastal regions. The Army's nuclear reactor on the barge Sturgis, which provided electric power to the Panama Canal from 1968 to 1976, demonstrated the feasibility of this concept. In fact, the military previously used several power barges (oil-fired, 30-MWe power plants) during World War II and in Korea and Okinawa as emergency sources of electric power.¶ Research teams around the world also are examining other reactor concepts based on liquid-metal-cooled reactor systems with conventional sodium or lead-alloy coolants and advanced water-cooled systems. The Department of Energy (DOE) is supporting research and development of innovative concepts that are based on ultra-long-life reactors with cartridge cores. These reactors would not require refueling, and they could be deployed in the field, removed at the end of their service life, and replaced by a new system. The proposed international reactor innovative and secure (IRIS) design, funded by DOE's Nuclear Energy Research Initiative, would have a straight burn core lasting 8 years and may be available by 2010. Based on increasing costs of fossil fuels, a growing consensus that greenhouse gas emissions must be reduced, and a growing demand for energy, there is little doubt that we will continue to see significant advances in nuclear energy research and development.¶ Nuclear power is expected to grow in the 21st century, with potential benefits applicable to the military. Small, modular nuclear power reactors in mobile or portable configurations, coupled with hydrogen production and desalination systems, could be used to produce fuel and potable water for combat forces deployed in remote areas and reduce our logistics requirements. Assuming the inevitability of hydrogen fuel replacing fossil fuels, a clearly defined objective that was missing in 1966 now exists.¶ The partnership between DOD and the former AEC to develop Army nuclear reactors contributed to the technology of both military and small commercial power plants. This historical relationship should be renewed based on recent technological advances and projected logistics requirements. DOD logistics planners should reconsider military applications of nuclear power and support ongoing DOE research and development initiatives to develop advanced reactors such as RS-MHR, IRIS, and others. For the Army to fight and win on tomorrow's distant battlefields, nuclear power will have to play a significant role.

#### Disasters are inevitable and getting worse---mobility’s key to mitigate effects

Johnstone 8 L Craig, Ambassador and UN Deputy High Commissioner for Refugees, "Planning for the Inevitable, the Humanitarian Consequences of Climate Change", 2008 is last date cited, www.unhcr.org/49256c492.pdf

Coping with the unpredictable is perhaps even more of a challenge. Here to there is a lack of government capacity which needs to be addressed as well as substantial financial needs. We need to put in place better mechanisms for predicting storms, floods and droughts. And when the predictions are in hand we need to able to communicate them effectively. It is instructive that much of the loss of life in the great South Asian Tsunami could have been avoided if an alert system had been in place to inform coastal residents of the impending catastrophe which was knowable in many areas a full six hours before the Tsunami struck. So too, in Myanmar that the country was going to be hit by an exceptional storm was known two days before it hit. Much more could have been done. The technologies are there; they need to be harnessed. ¶ But beyond early warning we need contingency plans in place that have been preapproved by governments. We need national institutions in place that are capable of responding quickly in carrying out the contingency plans. We cannot have a situation like in Myanmar when a government fails to recognize the extent of its emergency needs or like in the U.S. where government institutions were not up to the measure of the formidable tasks brought on by recent hurricanes. ¶ And we need a level of international emergency response that goes far beyond what we have today. Stocks must be available and pre-positioned. Transportation plans must be mobilizable on a moment’s notice. What we have done in UNHCR over the past year to build our current capability must be multiplied twenty fold if we are to be in a position to respond. ¶ And, we will need better means of international coordination and cooperation. We have a beginning in some of the recent efforts undertaken within the UN at achieving improved coordination, such as the Cluster process. But, we need to build on these efforts, de-bureaucratize them, and exercise and game the various contingencies. ¶ Finally we are going to have to mobilize the resources necessary to achieve both sides of the humanitarian need, the developmental and migratory needs that will stem from predictable consequences of climate change, and the emergency response needed to cope with dramatic events likely to take place. In this regard the Adaptation Fund called for under the Kyoto Protocol needs to be augmented and funded at a level that will enable it to deal with both dimensions of the humanitarian crisis wrought by global climate change. If the first priority of the Poznan and Copenhagen conferences is to get agreement on the steps necessary to prevent further environmental deterioration, the second priority should be to mitigate the consequences we already know to be inevitable. Full funding of an augmented Adaptation Fund is critical to this latter goal. ¶ I will leave you with a final observation. We speak about the humanitarian consequences of global climate change as though we are dealing with a future possibility. Far from it, this is not a possibility or even a probability, this is a certainty. And, this is not about the future, this is about NOW. The impact of changing weather is daily upon us and growing in intensity. In the past twenty years the incidence of major storms had doubled from 200 to 400 a year. Disasters caused by flooding have risen from 50 to 200 during that period and the damage is more extensive than previously. Today we deal with conflicts in Darfur and Somalia and elsewhere in which changing climate is one of the causes. The facts speak for themselves and lend a new urgency to the issue. The future of which we speak in this conference is upon us. And like the crisis, the response is not for future years, it is for now.

#### Inadequate response to disasters results in disease outbreak

Aljunid et al 12 Syed, Professor of Health Economics and Senior Research Fellow at UNU International Institute for Global Health, Kouadio Koffi Isidore, Postdoctoral Fellow at United Nations University International Institute for Global Health, Taro Kamigaki, Assistant Professor, at the Department of Virology of Tohoku University Graduate School of Medicine, Karen Hammad, Australian emergency nurse and Lecturer at the School of Nursing and Midwifery, Flinders University and Hitoshi Oshitani, Professor of Virology at Tohoku University Graduate School of Medicine, "Preventing and controlling infectious diseases after natural disasters", March 13, United Nations University, unu.edu/publications/articles/preventing-and-controlling-infectious-diseases-after-natural-disasters.html#info

Beyond damaging and destroying physical infrastructure, natural disasters can lead to outbreaks of infectious disease. In this article, two UNU-IIGH researchers and colleagues review risk factors and potential infectious diseases resulting from the secondary effects of major natural disasters that occurred from 2000 to 2011, classify possible diseases, and give recommendations on prevention, control measures and primary healthcare delivery improvements.¶ Over the past few decades, the incidence and magnitude of natural disasters has grown, resulting in substantial economic damages and affecting or killing millions of people. Recent disasters have shown that even the most developed countries are vulnerable to natural disasters, such as Hurricane Katrina in the United States in 2005 and the Great Eastern Japan Earthquake and tsunami in 2011. Global population growth, poverty, land shortages and urbanization in many countries have increased the number of people living in areas prone to natural disasters and multiplied the public health impacts.¶ Natural disasters can be split in three categories: hydro-meteorological disasters, geophysical disasters and geomorphologic disasters.¶ Hydro-meteorological disasters, like floods, are the most common (40 percent) natural disasters worldwide and are widely documented. The public health consequences of flooding are disease outbreaks mostly resulting from the displacement of people into overcrowded camps and cross-contamination of water sources with faecal material and toxic chemicals. Flooding also is usually followed by the proliferation of mosquitoes, resulting in an upsurgence of mosquito-borne diseases such as malaria. Documentation of disease outbreaks and the public health after-effects of tropical cyclones (hurricanes and typhoons) and tornadoes, however, is lacking.¶ Geophysical disasters are the second-most reported type of natural disaster, and earthquakes are the majority of disasters in this category. Outbreaks of infectious diseases may be reported when earthquake disasters result in substantial population displacement into unplanned and overcrowded shelters, with limited access to food and safe water. Disease outbreaks may also result from the destruction of water/sanitation systems and the degradation of sanitary conditions directly caused by the earthquake. Tsunamis are commonly associated with earthquakes, but can also be caused by powerful volcanic eruptions or underwater landslides. Although classified as geophysical disasters, they have a similar clinical and threat profile (water-related consequences) to that of tropical cyclones (e.g., typhoon or hurricane).¶ Geomorphologic disasters, such as avalanches and landslides, also are associated with infectious disease transmissions and outbreaks, but documentation is generally lacking.¶ After a natural disaster¶ The overwhelming majority of deaths immediately after a natural disaster are directly associated with blunt trauma, crush-related injuries and burn injuries. The risk of infectious disease outbreaks in the aftermath of natural disasters has usually been overemphasized by health officials and the media, leading to panic, confusion and sometimes to unnecessary public health activities.¶ The prolonged health impact of natural disasters on a community may be the consequence of the collapse of health facilities and healthcare systems, the disruption of surveillance and health programmes (immunization and vector control programmes), the limitation or destruction of farming activities (scarcity of food/food insecurity), or the interruption of ongoing treatments and use of unprescribed medications.¶ The risk factors for increased infectious diseases transmission and outbreaks are mainly associated with the after-effects of the disasters rather than to the primary disaster itself or to the corpses of those killed. These after-effects include displacement of populations (internally displaced persons and refugees), environmental changes and increased vector breeding sites. Unplanned and overcrowded shelters, poor water and sanitation conditions, poor nutritional status or insufficient personal hygiene are often the case. Consequently, there are low levels of immunity to vaccine-preventable diseases, or insufficient vaccination coverage and limited access to health care services.¶ Phases of outbreak and classification of infectious disease¶ Infectious disease transmission or outbreaks may be seen days, weeks or even months after the onset of the disaster. Three clinical phases of natural disasters summarize the chronological public health effects on injured people and survivors:¶ Phase (1), the impact phase (lasting up to to 4 days), is usually the period when victims are extricated and initial treatment of disaster-related injuries is provided.¶ Phase (2), the post-impact phase (4 days to 4 weeks), is the period when the first waves of infectious diseases (air-borne, food-borne, and/or water-borne infections) might emerge.¶ Phase (3), the recovery phase (after 4 weeks), is the period when symptoms of victims who have contracted infections with long incubation periods or those with latent-type infections may become clinically apparent. During this period, infectious diseases that are already endemic in the area, as well as newly imported ones among the affected community, may grow into an epidemic.¶ It is common to see the international community, NGOs, volunteers, experts and the media leaving a disaster-affected zone usually within three months, when in reality basic sanitation facilities and access to basic hygiene may still be unavailable or worsen due to the economic burden of the disasters.¶ Although it is not possible to predict with accuracy which diseases will occur following certain types of disasters, diseases can be distinguished as either water-borne, air-borne/droplet or vector-borne diseases, and contamination from wounded injuries.¶ Diarrhoeal diseases¶ The most documented and commonly occurring diseases are water-borne diseases (diarrhoeal diseases and Leptospirosis). Diarrhoeal diseases cause over 40 percent of the deaths in disaster and refugee camp settings. Epidemics among victims are commonly related to polluted water sources (faecal contamination), or contamination of water during transportation and storage. Outbreaks have also been related to shared water containers and cooking pots, scarcity of soap and contaminated food, as well as pre-existing poor sanitary infrastructures, water supply and sewerage systems.

#### New deadly disease outbreaks are inevitable

CDC Foundation 12 --- “How CDC Saves Lives By Controlling REAL Global Disease Outbreaks,” http://www.cdcfoundation.org/content/how-cdc-saves-lives-controlling-real-global-disease-outbreaks

Serious, deadly contagious disease outbreaks can and do happen. CDC investigates new contagious diseases—averaging one new contagion per year. These new contagious diseases can emerge right here or only a plane-ride away from here.¶ It’s not just new diseases that threaten the United States. Some diseases long thought controlled in the United States, like tuberculosis, can reemerge and be more deadly than ever.

#### Disease causes extinction---no burnout

**Torrey and Yolken 5** E. Fuller and Robert H, Directors Stanley Medical Research Institute, 2005, Beasts of the Earth: Animals, Humans and Disease, pp. 5-6

The outcome of this marriage, however, is not as clearly defined as it was once thought to be. For many years, it was believed that microbes and human slowly learn to live with each other as microbes evolve toward a benign coexistence wit their hosts. Thus, the bacterium that causes syphilis was thought to be extremely virulent when it initially spread among humans in the sixteenth century, then to have slowly become less virulent over the following three centuries. This reassuring view of microbial history has recently been challenged by Paul Ewald and others, who have questioned whether microbes do necessarily evolve toward long-term accommodation with their hosts. Under certain circumstances, Ewald argues, “Natural selection may…favor the evolution of extreme harmfulness if the exploitation that damages the host [i.e. disease] enhances the ability of the harmful variant to compete with a more benign pathogen.” The outcome of such a “marriage” may thus be the murder of one spouse by the other. In eschatological terms, this view argues that a microbe such as HIV or SARS virus may be truly capable of **eradicating the human race**.

#### **Water wars coming and cause conflict in the Middle East**

Chellaney 13--Brahma, interviewed by Radio Free Europe Radio Liberty, "Interview: Author Discusses Asia's Water Woes", Jan. 24, professor at the New Delhi-based Center for Policy Research, http://www.rferl.org/content/asia-water-woes/24882816.html

Brahma Chellaney, a professor at the New Delhi-based Center for Policy Research, has sounded alarms about the potential for conflict over water resources in Asia. ¶ In his award-winning book, "Water: Asia's Next Battleground," Chellaney argues that Asia has less freshwater per capita than any other continent, but is both guzzling and polluting its resources at an ever-increasing rate.¶ RFE/RL correspondent Courtney Brooks speaks with Chellaney about where the potential conflicts lie.¶ RFE/RL: What are some of the hotspots for water disputes in Asia and how do you see the situation evolving?¶ Brahma Chellaney: I see water becoming an increasingly divisive issue in large parts of Asia -- the Middle East, Central Asia, and [the] Caucasus, for example. I see water stress being a driver of conflict.¶RFE/RL: You mention in your book that battle lines in Afghanistan tend to follow the lines of water courses. What exactly does that mean? Can you give me some examples?¶ Chellaney: Afghanistan and Yemen are examples where internal conflicts are being waged along hydrological lines. Where waterways run those lines of water courses tend to be the lines separating feuding parties because the object of control in the feud is control of a water source.¶ And in Afghanistan we are finding that in some parts where scarcity is acute the control of wells and streams has become a source of conflict by itself. Warlords have emerged that can be called water warlords, whose basic job is to maintain control over a source of water. These are warlords with militias, and they are controlling sources of water for their community or for their province and such kind of overt use of force to assert control over a source of water is found in Afghanistan more than any other country.¶ RFE/RL: And the situation in Central Asia?¶ Chellaney: Water is the most divisive issue in Central Asia. Along with unsettled borders, water has become an even more explosive issue. Because you have in some parts of Central Asia borders that are not clearly demarcated and therefore the issue of water sharing and transnational water resources, their delineation. These issues are compounding the interstate and intrastate competition [and] the struggle for water.¶ Water is clearly, of all issues, the one that carries the highest risk of destabilizing Central Asia.¶Water is clearly, of all issues, the one that carries the highest risk of destabilizing Central Asia. And also, Central Asia is a very water-scarce region, and therefore the struggle is over scarce resources. The only countries that actually have the water resources are the small upstream countries of Kyrgyzstan and Tajikistan, [which are] small and powerless against the main users of water -- the countries located downstream: Uzbekistan, Turkmenistan, and Kazakhstan.’

#### Middle East war causes World War 3

The Earl of Stirling 11, hereditary Governor & Lord Lieutenant of Canada, Lord High Admiral of Nova Scotia, & B.Sc. in Pol. Sc. & History; M.A. in European Studies, “General Middle East War Nears - Syrian events more dangerous than even nuclear nightmare in Japan”, http://europebusines.blogspot.com/2011/03/general-middle-east-war-nears-syrian.html

Any Third Lebanon War/General Middle East War is apt to involve WMD on both side quickly as both sides know the stakes and that the Israelis are determined to end, once and for all, any Iranian opposition to a 'Greater Israel' domination of the entire Middle East. It will be a case of 'use your WMD or lose them' to enemy strikes. Any massive WMD usage against Israel will result in the usage of Israeli thermonuclear warheads against Arab and Persian populations centers in large parts of the Middle East, with the resulting spread of radioactive fallout over large parts of the Northern Hemisphere. However, the first use of nukes is apt to be lower yield warheads directed against Iranian underground facilities including both nuclear sites and governmental command and control and leadership bunkers, with some limited strikes also likely early-on in Syrian territory.¶ The Iranians are well prepared to launch a global Advanced Biological Warfare terrorism based strike against not only Israel and American and allied forces in the Middle East but also against the American, Canadian, British, French, German, Italian, etc., homelands. This will utilize DNA recombination based genetically engineered 'super killer viruses' that are designed to spread themselves throughout the world using humans as vectors. There are very few defenses against such warfare, other than total quarantine of the population until all of the different man-made viruses (and there could be dozens or even over a hundred different viruses released at the same time) have 'burned themselves out'. This could kill a third of the world's total population.¶Such a result from an Israeli triggered war would almost certainly cause a Russian-Chinese response that would eventually finish off what is left of Israel and begin a truly global war/WWIII with multiple war theaters around the world. It is highly unlikely that a Third World War, fought with 21st Century weaponry will be anything but the Biblical Armageddon.

#### Future devastating earthquakes in Haiti are inevitable

Quirin Schiermeier 10, German Correspondent for *Nature*, has written for about science and related policy since 1999, “Quake threat looms over Haiti”, *Nature* 467, 1018-1019 (2010), <http://www.nature.com/news/2010/101025/full/4671018a.html>

The half-minute of tremors that shook Haiti in January left death and destruction — and lingering questions about when and where another such quake might strike. Some 230,000 people died in the magnitude-7.0 quake, more than twice as many as in any recorded earthquake of similar strength. As the disaster drew aid workers from around the globe, scientists also flocked to the impoverished country to try to understand the quake.¶ What they found was unexpected. After ten months of intense field research, geologists are questioning conventional wisdom about what happened to Earth's crust during the fateful 30 seconds that set back Haiti's development by years. The research, summarized in a package of papers in the November issue of Nature Geoscience , has two common conclusions: the Haitian earthquake was more complex than initially believed, and may not have fully released the tectonic strain that had accumulated in the region. If so, Haiti is at serious risk of similar devastation in the future.¶ "The 12 January earthquake only unloaded a fraction of the seismic energy that has built up over time in Haiti," says Eric Calais, a geophysicist at Purdue University in West Lafayette, Indiana, and science adviser for the United Nations Development Programme in Haiti. "Other earthquakes are therefore inevitable."¶ The Haiti quake occurred in a Caribbean fault system called the Enriquillo–Plantain Garden, at the interface of the Caribbean and North American plates, where seismic strain gradually accumulates as the two plates slide past each other (see 'Anatomy of a quake'). Strong earthquakes originating from this fault have twice destroyed Port-au-Prince, in 1751 and 1770. Using computer models alongside satellite and field observations, Calais and other scientists have tried to establish which parts of the fault system ruptured this time around, and in which direction.¶ The results suggest that the quake may not have originated from the main fault in the system, as geologists had initially assumed. For example, there is a puzzling absence of the geological evidence normally left by tectonic slips that rupture the surface. A team led by Carol Prentice of the US Geological Survey (USGS) in Menlo Park, California, spent months searching the land along the plate boundary fault south of Port-au-Prince for such traces. Although they found stream channels that had been wrenched sideways during historic quakes, they failed to find any fresh signs of surface rupture around the main fault1.¶ "This is pretty bizarre," says Roger Bilham, a geologist at the University of Colorado, Boulder, who was not involved in the recent studies. "It might mean that the main fault is a geological fossil. But more likely its surface part has been clamped shut by a complex sequence of nearby slips in January. If so, another strong quake could happen any time soon right above the January epicentre."¶ The findings also mean that the January quake must have been triggered along another fault. To pinpoint it, two teams of scientists have created different fault models based on ground deformation, seismic waves recorded at the time, and the little that is known about local geology. Unsurprisingly, given the uncertainties in the data, the models differ considerably.¶ Calais' team says that the quake occurred on a previously unknown subsidiary fault in the Enriquillo–Plantain Garden. Dubbed Léogâne, after a nearby town, it lies to the north of and parallel to the main fault2.¶ The second team, led by Gavin Hayes, a seismologist with the USGS in Golden, Colorado, reckons that the quake involved at least three faults, which mutually triggered each others' slipping. The slip started on either the main Enriquillo fault or the Léogâne subsidiary fault, they conclude3.¶ To assess the hazard of future quakes in the region, scientists need to know how much additional seismic stress was transferred to nearby faults by January's disaster. But that assessment would vary depending on the model used — an uncertainty that offers little comfort for planners and engineers in Haiti, or for the 1.3 million survivors living in camps after their homes were destroyed. As Nature went to press, those people were facing the growing threat of a rapidly spreading cholera outbreak.

#### Haiti’s recovering but dependent on tourism to the capital --- a new earthquake wrecks economic development

Tim Padgett 13 with Susana Ferreira/Léogâne, TIME, “Haiti Three Years After the Quake: There’s Good News, Too”, http://world.time.com/2013/01/12/haiti-three-years-after-the-quake-theres-good-news-too/

The CAED, which to Lamothe signals renewed “aid sovereignty” for Haiti, is supposed to steer reconstruction funds more directly to Haitian government priorities. And to their credit, Martelly and Lamothe have stepped up efforts to resettle homeless Haitians out of tent camps—where residents face horrors ranging from cholera to rape—and into new or rebuilt housing, often in their neighborhoods of origin. They’ve also been crusading hard for investment and pushing bureaucratic reforms to streamline the epic red tape businesses face in Haiti. “We have a very aggressive investment code,” Lamothe told the Caribbean Journal recently. “Haiti is open for business.”¶ That’s a good thing, as long as Haiti doesn’t simply trade its dependence on foreign aid for another short-term addiction all too common among developing economies: tourism. Haiti, home to gorgeous beaches, mountains and one of the richer cultures in the Americas, certainly needs to revive that sector, and the Martelly government has scored coups of late: a new deal with Montreal-based tour operator Air Transat, for example, as well as the country’s first five-star hotel, a $40 million facelift for the coastal resort town of Jacmel and similar plans for Ile à Vache, one of the Caribbean’s most scenic islands. But tourism is also a notoriously unreliable industry on which to base economic development—as evidenced by the tourism-dependent Caribbean basin, which today sports five of the world’s 13 most heavily indebted nations, including Jamaica.¶ Which is why Martelly should focus less on cruise ships and more on the vessels he campaigned on, including decentralization and agricultural modernization. (The U.S. didn’t help the tourism push, either, when it issued what many called an overheated travel warning last month about violent crime in Haiti, where kidnapping has been a problem but the murder rate isn’t much higher than the U.S.’s.) It is of course crucial to restore homes and businesses in Port-au-Prince; but most development experts—as well as earthquake experts, who warn that the over-populated city, where an excessive fifth of Haiti’s 10 million people live, is vulnerable to another temblor as strong if not stronger than the 7.0-magnitude upheaval of 2010—agree it’s just as critical to spread more of Haitian life out of the capital.

#### That prevents Haitian democracy – econ’s on the brink

 Richard Albert 2-1, Constitutional Law Professor, Boston College Law School,

“Can Democracy Work in Haiti?” http://www.huffingtonpost.com/richard-albert/can-democracy-work-in-hai\_1\_b\_2595811.html”

There are other plausible explanations why democracy has not yet taken root in Haiti. Perhaps, as other scholars have argued, economic growth is a condition precedent to democracy. With Haiti's economy on life support for so much of its history and still today, this could explain why Haiti is not yet a democracy.¶ Haiti's problems may also be a result of nature. As natural disasters have continued to strike Haiti at record pace and intensity, Haiti has had to spend its time rebuilding after ruin, cleaning up after catastrophe, burying its departed, and has therefore been kept from turning to the task of building democracy. It could also be that corruption in Haiti is growing, not declining, and that those in power do not have the best interest of the nation at heart.

#### Haitian democracy’s a model for all of Latin America --- credible US disaster mitigation is key

CPR 4 (Congressional Press Releases, February 26, 2004 Thursday, MR. PRESIDENT, YOU MUST ACT NOW ON HAITI, DEMOCRATIC MEMBERS, Lexis)

Ranking Subcommittee Democrat Bob Menendez (D-NJ) said, "The United States has an obligation to send a clear signal that we support democracy and the rule of law. We urge the President to act immediately to prevent further violence and a severe humanitarian crisis. Our words and actions in this crisis have consequences beyond Haiti and will be heard throughout the Western Hemisphere. At a moment when numerous democracies in the region are threatened, the United States cannot stand idly by and watch years of democratic progress crumble." Ranking Member of the House International Relations Committee Tom Lantos (D-CA) said, "The time is now. The Administration must immediately work feverishly to secure UN authorization for an international civilian security force to come to the aid of a democratically elected head of government against a band of known criminals and henchmen to former military dictators." Western Hemisphere Subcommittee Member and long-time Haiti supporter, Congressman Donald Payne (D-NJ) urged President Bush to publicly condemn the attempt to overthrow a democratically- elected government. "We urge the US to take the lead for a quick diplomatic solution and the UN Security Council to immediately come to a decision for an international security force to help bring an end to the violence and humanitarian crisis," Payne said. "People are dying, food is running out, and Haiti's fragile institutions cannot withstand the crisis. The US must act now and lead an international effort in Haiti." Congressman William D. Delahunt (D-MA), also a Member of the Western Hemisphere Subcommittee added, "The situation in Haiti is deteriorating rapidly, with potentially serious consequences for the United States. Yet the Bush Administration continues to send mixed messages about the legitimacy of the government of President Aristide, apparently not realizing that this has implications far beyond the current crisis in Haiti. The Administration's reluctance to support a legitimately-elected President threatened with violent overthrow sends a terrible message about the US commitment to democracy and our own credibility. Thus it has regrettably become necessary for President Bush to personally clarify that the US continues to support democracy. He must state, publicly and unequivocally, that the US will actively take steps to stop the violence, and will not recognize or accept any new Haitian government that is not the product of a constitutional, democratic and peaceful process."

#### Latin America key to global democracy

Grandin 11 (Greg, professor of history at NYU, PhD from Yale, finalist in the Pulitzer Prize for History, former consultant with the Historical Clarification Commission, member of the American Academy of Arts and Sciences, “Obama Holds Up Latin America as a Model for the Middle East—If Only,” 3/22, http://www.thenation.com/blog/159380/obama-holds-latin-america-model-middle-east)

Obama gave his trip’s keynote speech in Chile, holding up Latin America’s move away from the feverish violence of the cold war and embrace of democracy as a model for the rest of the world, with pointed reference to the Middle East.¶ Let’s hope he is right, for Latin America over the last decade has been a source of inspiration—not for the kind of anemic democracy the necons believe we can impose on recalcitrant states with a barrage of cruise missiles. The ongoing vitality of democracy in Latin America exists despite, not because, of US policy. It is not just rooted in constitutional proceduralism, in electoral rotations and checks on government power but in mobilized protest for a better world. And it is driven by an abiding faith in social democracy, a belief that for a society to be democratic it also has to be just—both in terms of welfare and enforcement of human rights. It is the heroic activists on the ground, from peasants in Honduras to the MST in Brazil and the Mapuches in southern Chile, who refuse to sit still as international corporations seek to turn the continent into a giant warehouse of primary material, water, gas, oil, soy, what have you, to serve the unsustainable needs of a globalized economy. It is the real human-rights activists, people like Berta Oliva, the besieged director of the Honduran Committee of the Families of the Detained and Disappeared, who refuse to keep quiet as they are lectured about letting bygones be bygones—that make the region democratic.

#### Democratic backsliding causes great power war

Azar Gat 11, the Ezer Weizman Professor of National Security at Tel Aviv University, 2011, “The Changing Character of War,” in The Changing Character of War, ed. Hew Strachan and Sibylle Scheipers, p. 30-32

Since 1945, the decline of major great power war has deepened further. Nuclear weapons have concentrated the minds of all concerned wonderfully, but no less important have been the institutionalization of free trade and the closely related process of rapid and sustained economic growth throughout the capitalist world. The communist bloc did not participate in the system of free trade, but at least initially it too experienced substantial growth, and, unlike Germany and Japan, it was always sufﬁciently large and rich in natural resources to maintain an autarky of sorts. With the Soviet collapse and with the integration of the former communist powers into the global capitalist economy, the prospect of a major war within the developed world seems to have become very remote indeed. This is one of the main sources for the feeling that war has been transformed: its geopolitical centre of gravity has shifted radically. The modernized, economically developed parts of the world constitute a ‘zone of peace’. War now seems to be conﬁned to the less-developed parts of the globe, the world’s ‘zone of war’, where countries that have so far failed to embrace modernization and its pacifying spin-off effects continue to be engaged in wars among themselves, as well as with developed countries.¶ While the trend is very real, one wonders if the near disappearance of armed conﬂict within the developed world is likely to remain as stark as it has been since the collapse of communism. The post-Cold War moment may turn out to be a ﬂeeting one. The probability of major wars within the developed world remains low—because of the factors already mentioned: increasing wealth, economic openness and interdependence, and nuclear deterrence. But the deep sense of change prevailing since 1989 has been based on the far more radical notion that the triumph of capitalism also spelled the irresistible ultimate victory of democracy; and that in an afﬂuent and democratic world, major conﬂict no longer needs to be feared or seriously prepared for. This notion, however, is fast eroding with the return of capitalist non-democratic great powers that have been absent from the international system since 1945. Above all, there is the formerly communist and fast industrializing authoritarian-capitalist China, whose massive growth represents the greatest change in the global balance of power. Russia, too, is retreating from its postcommunist liberalism and assuming an increasingly authoritarian character.¶ Authoritarian capitalism may be more viable than people tend to assume. 8 The communist great powers failed even though they were potentially larger than the democracies, because their economic systems failed them. By contrast, the capitalist authoritarian/totalitarian powers during the ﬁrst half of the twentieth century, Germany and Japan, particularly the former, were as efﬁcient economically as, and if anything more successful militarily than, their democratic counterparts. They were defeated in war mainly because they were too small and ultimately succumbed to the exceptional continental size of the United States (in alliance with the communist Soviet Union during the Second World War). However, the new non-democratic powers are both large and capitalist. China in particular is the largest player in the international system in terms of population and is showing spectacular economic growth that within a generation or two is likely to make it a true non-democratic superpower.¶ Although the return of capitalist non-democratic great powers does not necessarily imply open conﬂict or war, it might indicate that the democratic hegemony since the Soviet Union’s collapse could be short-lived and that a universal ‘democratic peace’ may still be far off. The new capitalist authoritarian powers are deeply integrated into the world economy. They partake of the development-open-trade-capitalist cause of peace, but not of the liberal democratic cause. Thus, it is crucially important that any protectionist turn in the system is avoided so as to prevent a grab for markets and raw materials such as that which followed the disastrous slide into imperial protectionism and conﬂict during the ﬁrst part of the twentieth century. Of course, the openness of the world economy does not depend exclusively on the democracies. In time, China itself might become more protectionist, as it grows wealthier, its labour costs rise, and its current competitive edge diminishes.¶ With the possible exception of the sore Taiwan problem, China is likely to be less restless and revisionist than the territorially conﬁned Germany and Japan were. Russia, which is still reeling from having lost an empire, may be more problematic. However, as China grows in power, it is likely to become more assertive, ﬂex its muscles, and behave like a superpower, even if it does not become particularly aggressive. The democratic and non-democratic powers may coexist more or less peacefully, albeit warily, side by side, armed because of mutual fear and suspicion, as a result of the so-called ‘security dilemma’, and against worst-case scenarios. But there is also the prospect of more antagonistic relations, accentuated ideological rivalry, potential and actual conﬂict, intensiﬁed arms races, and even new cold wars, with spheres of inﬂuence and opposing coalitions. Although great power relations will probably vary from those that prevailed during any of the great twentieth-century conﬂicts, as conditions are never quite the same, they may vary less than seemed likely only a short while ago.

#### Mobile military SMRs prevent water wars

Pfeffer and Macon 1 Robert A, United States Army Nuclear and Chemical Agency, and William A, United States Nuclear Regulatory Commission, "Military Applications of Nuclear Power", xa.yimg.com/kq/groups/21317662/49832714/name/Military+applications+of+nuclear+power+A+think+piece.pdf

The demand for desalination of seawater is also likely to grow, as inadequate freshwater supplies become an urgent global concern. Potable water in the 21st century will be what oil was in the 20th century - a limited natural resource subject to intense international competition. In many areas of the world, rain is not always dependable and ground water supplies are limited, exhausted, or contaminated. Such areas are likely to experience conflict among water-needy peoples, possibly prompting the deployment of U.S. ground forces for humanitarian relief, peacekeeping, or armed intervention. A mobile power plant could help prevent conflicts or provide emergency supplies of fuel and potable water to indigenous peoples and deployed ground forces.

### 1AC – Plan

#### The United States Executive branch should acquire electricity from mobile small modular nuclear reactors in the United States for the Marine Corps.

### 1AC – Solvency

#### CONTENTION 3: SOLVENCY

#### The Marines should lead from the front with SMR deployment---it ensures base security and desalination

Butler 11Lt. Col. Glen Butler, USMC, NORAD Strategy, Policy, and Plans Directorate, Security Cooperation Integration Branch, Chase Prize Essay Winner for this Article, 18 Mar 2011, Marine Corps Gazette, Not Green Enough, “Why the Marine Corps should lead the environmental and energy way forward and how to do it”, http://www.mca-marines.org/gazette/not-green-enough \*\*\*Edited: Footnote included\*\*\*

Consider Nuclear Power¶ On 16 March 1979, The China Syndrome opened in theaters across the country, depicting a fictitious story about a reporter witnessing an accident at the Ventanna nuclear plant outside Los Angeles and the subsequent evil plot to suppress the truth. Twelve days later the Three Mile Island partial core meltdown in Pennsylvania helped propel The China Syndrome to theatrical success and permanently scarred the American psyche. The nail in the nuclear energy coffin was the nuclear disaster 7 years later at Chernobyl, in the Ukrainian Soviet Socialist Republic.17 But despite these stains on the nuclear power industry, the time has never been better for the Marine Corps (and Navy) to dive in than now. Here’s why.¶ First, the political climate, though still tenuous, is shifting to favorable, with the change coming from the top down. During his 27 January 2010 State of the Union address, President Barack Obama echoed themes from his campaign trail by clearly voicing his intention to include nuclear power in American’s playbook of energy security options.18 Similarly, as the Department of Energy’s (DoE’s) Secretary of Energy, Steven Chu has articulated similar sentiments, declaring that “President Obama and I are committed to restarting the nuclear industry in the United States.”19 Many other political leaders and policymakers indeed support a true “nuclear renaissance,”20 and the growing momentum stands a chance to bury the ghosts of Chernobyl once and for all.¶ Second, with our well-replicated but limited pursuit of the standard renewable energies,21 we’re putting all energy eggs in one basket, a vessel unlikely to hold a sufficient load for success. Currently pursued renewable energy sources do have limitations.22 More importantly, with military installations relying almost exclusively on external sources for energy, and those sources largely unpredictable, unsecured, and reliant on foreign-based oil,23 if energy security is truly a national security issue, then nuclear power should be considered. Solar demonstrations at Miramar and Barstow are not enough.¶ Third, nuclear technology today has advanced well beyond the days of Three Mile Island. Specifically, small modular reactors (SMRs) offer great potential to safely and effectively provide energy island/net zero capabilities to Marine Corps and Navy installations across the country.24¶ SMRs have relatively low plant cost, can replace aging fossil plants, and do not emit greenhouse gasses. Some are as small as a “hot tub” and can be stored underground, dramatically increasing safety and security from terrorist threats.25 Encouragingly, in fiscal year 2010 (FY10) the DoE allocated $0 to the U.S. SMR Program; in FY11, they’ve requested $38.9 million. This funding is to support two main activities—public/private partnerships to advance SMR designs and research and development and demonstrations. According to the DoE’s website, one of the planned program accomplishments for FY11 is to “collaborate with the Department of Defense (DoD) . . . to assess the feasibility of SMR designs for energy resources at DoD installations.”26 The Marine Corps should vigorously seek the opportunity to be a DoD entity providing one platform for this feasibility assessment.27¶ Fourth, SMR technology offers the Marine Corps another unique means to lead from the front—not just of the other Services but also of the Nation, and even the world.28 This potential Pete Ellis moment should be seized. There are simple steps we could take,29 and others stand ready to lead if we are not.30 But the temptation to “wait and see” and “let the others do it; then we’ll adopt it” mentality is not always best. Energy security demands boldness, not timidity.¶ To be fair, nuclear technology comes with challenges, of course, and with questions that have been kicked around for decades. An April 1990 Popular Science article asked, “Next Generation Nuclear Reactors—Dare we build them?” and included some of the same verbiage heard in similar discussions today.31 Compliance with National Environment Policy Act requirements necessitates lengthy and detailed preaction analyses, critical community support must be earned, and disposal challenges remain. Still, none of these hurdles are insurmountable.32¶ Yet despite the advances in safety, security, and efficiency in recent years, nuclear in the energy equation remains the new “n-word” for most military circles. And despite the fact that the FY10 National Defense Authorization Act called on the DoD to “conduct a study [of] the feasibility of nuclear plants on military installations,” the Office of the Secretary of Defense has yet to fund the study.33¶ Fifth, the cumbersome, bureaucratic certification process of the Nuclear Regulatory Commission (NRC), often enough to scare away potential entrepreneurs and investors, is not necessarily a roadblock to success. The NRC is “responsible for licensing and regulating the operation of commercial nuclear power plants in the United States.” Military installations offer unique platforms that could likely bypass an extended certification process. With established expertise and a long safety record in nuclear reactor certification, operations, training, and maintenance, the Naval Nuclear Propulsion Program comprises the civilian and military personnel who:¶ . . . design, build, operate, maintain, and manage the nuclear-powered ships and the many facilities that support the U.S. nuclear-powered naval fleet.”34¶ Bypassing the NRC and initiating SMR experimentation under ADM Hyman Rickover’s legacy umbrella of naval reactors could shorten the process to a reasonable level for Marine and naval installations.35¶ Finally, Marine Corps-SMR technology opens the pathway for related endeavors and synergetic undertakings. The Army has several smart and influential individuals poised to partner in nuclear energy endeavors, and our naval brethren enjoy a long history of nuclear reactor expertise. Partnerships and enhanced use leases to support SMR deployments should be leveraged.36 As the collective military expertise in SMR technology grows, additional capabilities, such as expeditionary and vehicular power sources, could be explored. And related technologies, such as hybrid/electric vehicle power storage and recharging facilities and water desalination plants, could collocate with nuclear plants on installations to both use the energy.37

#### Military should take the lead---key to overcome barriers for mobile reactors

Andres and Breetz 11 Richard B, Professor of National Security Strategy at the National War College and a Senior Fellow and Energy and Environmental Security and Policy Chair in the Center for Strategic Research, Institute for National Strategic Studies, at the National Defense University and Hanna L, doctoral candidate in the Department of Political Science at The Massachusetts Institute of Technology, February, "Small Nuclear Reactors for Military Installations: Capabilities, Costs, and Technological Implications", www.ndu.edu/press/lib/pdf/StrForum/SF-262.pdf

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 protecting 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. Government 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 be used even in active operational environments. These reactors are potentially safer than conventional light water 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 potential 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 evaluation 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 United States, 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 technology will be unavailable in the future for either U.S. military or commercial use.

#### Plan’s demonstration domestically spills over

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

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

#### Mobile nuclear can power the military---tech is feasible now

Schaffer and Chang 9 Marvin Baker, Adjunct staff Member at the RAND Corporation and Ike, independent consultant, “Mobile Nuclear Power for Future Land Combat”, issue 52, 1st quarter 2009, PDF Online

Since there are currently 33 combat infantry and armor/cavalry brigades, we propose to field 100 reactors and 100 electrolysis units including spares. These mobile facilities would replace traditional Forward Area Refueling Points (FARPs). Descriptively, we call them "nuclear FARPs." The mobility concept is to move the nuclear FARP every day or so under battlefield conditions. These will be movements of hundreds of feet by road. Movement between FARPs, however, would be by C-5A/B or by airship. (15) Such procedures, admittedly needing refinement, underlie the survivability of a nuclear FARP. ¶ We assume air and space superiority conditions that preclude the use of enemy manned aircraft and unmanned combat air vehicles. That leaves only long-range satellite- and terrain-guided missiles as viable methods of standoff attack. (16) Mobility ensures survivability against such fixed-coordinate missiles. Note that it will be necessary to shield the heat signature produced by the reactors; otherwise, they will be vulnerable to heat-seeking guidance. Thermal shielding can be achieved with overhead canvas and blowers to disperse heat peripherally. Overhead canvas would also enable a degree of camouflage. ¶ The U.S. Army has had extensive experience with transportable reactor technology. From 1968 to 1976, a 45-MW nuclear reactor on the barge Sturgis provided power for the Panama Canal community. (17) Other portable nuclear reactors were operated in Wyoming, Greenland, and Antarctica. ¶ It may also be possible to provide fleetwide monitoring of the reactors and electrolysis units by satellite to permit cost-saving, manpower-efficient troubleshooting. ¶ Strategic Implications ¶ Strategic implications of a mobile and survivable fleet of vehicles independent of fossil fuels would be profound. They include: ¶ \* fielding combat vehicles with affordable, self-sufficient sources of abundant fuel that do not contribute to atmospheric pollution ¶ \* providing fuel to a dispersed fleet in a survivable, sustainable manner ¶ \* eliminating vulnerable in-theater, singlepoint, fixed-location sources of fuel manufacture and distribution ¶ \* diminishing the logistic footprint associated with hauling fuel tonnages over thousands of miles to supply an operating theater military force ¶ \* developing a mobile testbed for modular nuclear-powered electricity to provide alternatives for the fossil fuel crisis now gripping the world economy ¶ \* providing a means to supply low-cost power in support of humanitarian missions around the world. ¶ The cost of fossil fuels combined with the low survivability of fixed extraction, refining, and distribution systems puts the Army's land-based fleet of combat vehicles in jeopardy for future conflicts. The Army should define a new fleet of vehicles powered by a combination of electricity and hydrogen. Preferably, this fleet would be energized by theater-mobile nuclear reactors and theater-mobile hydrogen manufacturing facilities. Appropriate technology for these vehicles, reactors, and manufacturing facilities is just beginning to become available commercially. ¶ Electrically powered vehicles with military potential are not currently available but may become practical in a decade or so. However, fuel cell-powered vehicles, hydrogen-powered vehicles, and hybrids are all approaching commercial viability. Military versions can be expected in the 2010-2020 timeframe. The Army needs to define its requirements and plan for the future fleet in terms of survivability, affordability, and independence of fuel sources. ¶ Mobile nuclear reactors in several varieties can be postulated. They weigh 90 to 100 tons and can be transported on a C-5A/B transport aircraft or a Walrus-type airship derivative and locally on a flatbed truck. They produce power of 4.5 to 5 MW, sufficient to provide hydrogen and electricity to fuel about 400 vehicles daily. One appropriate type of hydrogen manufacturing facility is a high-temperature electrolysis unit. It also can be made mobile and can be powered by a mobile nuclear reactor. ¶ The general benefits of the mobile fueling system postulated are profound and revolutionary. They provide for: ¶ \* a lighter, more mobile military ¶ \* streamlined logistics ¶ \* more ammunition resulting from reduced fuel tonnage ¶ \* minimized energy supply chain ¶ \* energy with national self-sufficiency ¶ \* reduced energy infrastructure ¶ \* sustainability ¶ \* increased survivability ¶ \* increased affordability ¶ \* greater tactical efficiency. ¶ Detailed planning for the new land vehicle fleet is needed. It should include specifications for land vehicles, mobile reactors, mobile hydrogen manufacturing facilities, and transport aircraft, airships, and trucks. A concept of operations needs to be developed in accordance with military standards. ¶ Mobile, affordable, and reliable power sources based on nuclear power have the potential to permit viable operations of the Army for the foreseeable future. The concept warrants extensive study by the Department of Defense and the Department of the Army.

#### SMRs avoid nuclear downsides

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

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

# 2AC

## Heg

### 2AC Sustainability

#### Heg is structurally sustainable but may be interrupted by bad policies

Beckley 12—Michael Charles Beckley, Assistant Professor of Political Science at Tufts University and a U.S. Foreign Policy and International Security fellow at Dartmouth’s Dickey Center for International Understanding, 12, The Unipolar Era: Why American Power Persists and China's Rise Is Limited, http://academiccommons.columbia.edu/item/ac:146399

First, I show that the United States is not in decline. Across most indicators of national power, the United States has maintained, and in some areas increased, its lead over other countries since 1991. Declinists often characterize the expansion of globalization and U.S. hegemonic burdens as sufficient conditions for U.S. relative decline. Yet, over the last two decades American economic and military dominance endured while globalization and U.S. hegemony increased significantly.¶ Second, I find that U.S. hegemony is profitable in certain areas. The United States delegates part of the burden of maintaining international security to others while channeling its own resources, and some of its allies resources, into enhancing its own military dominance. It imposes punitive trade measures against others while deterring such measures against its own industries. And it manipulates global technology flows in ways that enhance the technological and military capabilities of itself and allies. Such a privileged position has not provoked significant opposition from other countries. In fact, balancing against the United States has declined steadily since the end of the Cold War.¶ Third, I conclude that globalization benefits the United States more than other countries. Globalization causes innovative activity to concentrate in areas where it is done most efficiently. Because the United States is already wealthy and innovative, it sucks up capital, technology, and people from the rest of the world.¶ Paradoxically, therefore, the diffusion of technology around the globe helps sustain a concentration of technological and military capabilities in the United States.¶ Taken together, these results suggest that unipolarity will be an enduring feature of international relations, not a passing moment in time, but a deeply embedded material condition that will persist for the foreseeable future. The United States may decline because of some unforeseen disaster, bad policies, or from domestic decay. But the two chief features of the current international system -American hegemony and globalization - both reinforce unipolarity.

## T

### 2AC T – Financial Incentive

#### We meet – acquiring is T

US Code 3 Legal Information Institute, “41 USC § 131 – Acquisition”, November 24, <http://www.law.cornell.edu/uscode/text/41/131?quicktabs_8=1#quicktabs-8>

In division B, the term “acquisition”—¶ (1) means the process of acquiring, with appropriated amounts, by contract for purchase or lease, property or services (including construction) that support the missions and goals of an executive agency, from the point at which the requirements of the executive agency are established in consultation with the chief acquisition officer of the executive agency; and¶ (2) includes—¶ (A) the process of acquiring property or services that are already in existence, or that must be created, developed, demonstrated, and evaluated;¶ (B) the description of requirements to satisfy agency needs;¶ (C) solicitation and selection of sources;¶ (D) award of contracts;¶ (E) contract performance;¶ (F) contract financing;¶ (G) management and measurement of contract performance through final delivery and payment; and¶ (H) technical and management functions directly related to the process of fulfilling agency requirements by contract.

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

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

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

#### Prefer our interp:

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

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

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

#### Ground – weak solvency mechanisms suck and purchasing provides great spending and process CPs while still allowing the aff to beat states

#### No limits DA – money for energy and SMRs are the topic

#### Reasonability – competing interpretations causes a race to the bottom – over-incentivizes going for T to arbitrarily limit out the aff

## CP

### 2AC CP

#### All the benefits of thorium are far off and hypothetical—there’s a reason the industry isn’t investing.

NNL 12—National Nuclear Laboratory (UK), Comparison of thorium and uranium fuel cycles, NNL (11) 11593 Issue 5, A report prepared for and on behalf of Department of Energy and Climate Change, http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/nuclear/6300-comparison-fuel-cycles.pdf

Thorium fuel cycle R&D has a long history dating back to the very beginning of the nuclear industry. Though there are potential advantages, with the exception of India, it has failed to become established in commercial reactors for the reasons that have been explained in this report. Even in India, utilisation of thorium fuels still remains at relatively small scale. In recent years the thorium fuel cycle has been promoted by many research groups and technical companies such as Lightbridge and Thor Energy.¶ While the thorium fuel cycle has some benefits compared with the uranium-plutonium fuel cycle, these have yet to be demonstrated or substantiated, particularly in a commercial or regulatory environment. The U-Pu fuel cycle has the advantage of being fully mature and of having used in three generations of reactor designs. In contrast, the thorium fuel cycle is disadvantaged because all the supporting infrastructure would have to be established from scratch.¶ This is very relevant to the UK, especially at the present time in view of plans to start a new build programme in the UK based on LWRs. It could be argued that the main priority for the UK is to ensure the momentum that the new build programme currently has built up is maintained, in order that the new build plants will be available in good time to meet the projected shortfalls of low carbon electrical capacity. This only permits existing reactor designs with the uranium-plutonium fuel cycle. Innovative thorium fuelled reactors will not be a viable alternative for at least 20 to 30 years and definitely cannot meet the new build timescales. A limited role for thorium fuels in new build LWRs might be possible at a later date, with perhaps a partial transition to thorium-U233 fuels later in their lifetimes and any major shift towards the thorium fuel cycle would only be realistic in a follow-on programme of reactor construction.¶ Thorium fuelled reactors have already been advocated as being inherently safer than LWRs [18], but the basis of these claims is not sufficiently substantiated and will not be for many years, if at all. Suggesting that the UK should consider thorium reactors as a safer alternative to LWRs is not a viable option at this time as the UK energy shortfall and demand is on much shorzter timescales than thorium fuelled reactors could respond to. Furthermore, since the energy market is driven by private investment and with none of the utility companies investing or currently developing either thorium fuels or thorium fuelled reactor concepts, it is clear that there is little appetite or belief in the safety or performance claims.

### AT: China Tradeoff DA

#### US is cooperating---not zero sum

The Economist 3-6, “Cleaning up,” 3-6-13, <http://www.economist.com/blogs/analects/2013/03/renewable-energy>

A CASUAL glance at the business headlines might suggest that China’s renewable-energy industry is an unstoppable juggernaut. Over the past decade, Chinese firms have used supportive government policies and lavish subsidies to leapfrog to the top of the world’s wind and solar industries. This has prompted political backlashes overseas—especially in America, where Chinese exporters have faced anti-dumping duties and worse.¶ So China must hold a massively large trade surplus in clean energy with America, right? Quite the opposite, finds a striking report titled “Advantage America” released on March 6th. The two countries traded about $6.5 billion in solar, wind and smart-grid technology and services in 2011—and America sold $1.63 billion more of such kit to China than it imported from there. The analysis was done by Bloomberg New Energy Finance (BNEF), an industry publisher, and funded the Pew Charitable Trusts, a charity.¶ More surprising is the fact that America’s lead was maintained in all three categories studied by the boffins: solar, wind and smart energy technologies (see chart). One important explanation for this is that while China has strengths in large-scale assembly and mass manufacturing, it lacks the innovation to come up with high-value inputs. So American ingenuity is required to supply Chinese factories with such things as polysilicon and wafers for photovoltaic cells, and the fibreglass and control systems used in wind turbines.¶ The resulting picture is one that is reflective of the broader US-China relationship beyond trade. The two countries, though often appearing at loggerheads, are actually best seen in symbiosis. As Michael Liebreich of BNEF puts it in the report’s foreword, “the United States and China…are not so much competing as they are interdependent**.”**

#### No SMR exports

Al Fin 12, energy columnist for Oil Price – an online energy markets magazine, “Small Modular Reactors: Slugging it Out”, February 28, <http://alfin2300.blogspot.com/2012/02/small-modular-reactors-slugging-it-out.html>

More, France and Russia are at the forefront of SMR development, and Argentina is also making an effort to develop a workable SMR design. It is also likely that China will turn to SMRs for both electrical generation and process heat, as the Middle Kingdom grows and improves its nuclear industry capability. The UK may also help in the early stages of SMR development, by assisting the development of early PRISM reactors.¶ Getting past the US Nuclear Regulatory Commission's design licensing hurdle will cost hundreds of millions of dollars for each entry in the SMR race. That will require deep pockets, and a huge staff to interface with NRC bureaucrats. Clearly the US government -- for all its lip service to the future of the US economy -- is not in a tremendous hurry to help develop this revolutionary technology.¶ It is going to be a long uphill battle.

#### Trade barriers unique to reactor components mean the US can’t export

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

Some U.S. suppliers also note that the United States currently levies tariffs between 3.3 percent and 5.2 percent on key nuclear reactor components, but the tariffs are currently suspended in some cases (specifically for reactor pressure vessels and steam turbine generators that were ordered before July 31, 2006). Tariffs around the world, particularly in the European Union and South Korea, are higher on such components. Coupled with significant foreign government support, foreign suppliers can more easily enter the U.S. market, while U.S. manufacturers face a significant trade barrier in key foreign markets.

#### Nuclear not key to Chinese soft power

The Economist 12

The Economist, Mar 10th 2012, “Bandwagons and busts,” http://www.economist.com/node/21549094

By nuclear standards, this is a big deal; China will add more nuclear capacity in those ten years than France has in total. But for China itself it is less big; nuclear will go from generating less than 2% of the country's electricity to less than 5%. Ming Sung, who works for the Clean Air Task Force, an American think-tank in Beijing, points out that China is not betting on nuclear; it is betting on everything that offers an alternative to coal. China consumes half the world's annual coal output, and has the supply problems, dirty air and huge death toll (hundreds of thousands a year from respiratory diseases) that go with it. Junda Lin of the China Greentech Initiative points out that the 2020 target for nuclear has to be seen in the context of a 200GW target for wind and an extra 100GW of hydropower. The idea is to try everything and see what works best.

### AT: Asia War

#### Multiple factors make Asia war unlikely

Vannarith 10—Executive Director of the Cambodian Institute for Cooperation and Peace. PhD in Asia Pacific Studies, Ritsumeikan Asia Pacific U (Chheang, Asia Pacific Security Issues: Challenges and Adaptive Mechanism, <http://www.cicp.org.kh/download/CICP%20Policy%20brief/CICP%20Policy%20brief%20No%203.pdf>)

Some people look to China for economic and strategic interests while others still stick to the US. Since, as a human nature, change is not widely acceptable due to the high level of uncertainty. It is therefore logical to say that most of the regional leaders prefer to see the status quo of security architecture in the Asia Pacific Region in which US is the hub of security provision. But it is impossible to preserve the status quo since China needs to strategically outreach to the wider region in order to get necessary resources especially energy and raw materials to maintain her economic growth in the home country. It is understandable that China needs to have stable high economic growth of about 8 percent GDP growth per year for her own economic and political survival. Widening development gap and employment are the two main issues facing China. Without China, the world will not enjoy peace, stability, and development. China is the locomotive of global and regional economic development and contributes to global and regional peace and stability. It is understandable that China is struggling to break the so-called containment strategy imposed by the US since the post Cold War. Whether this tendency can lead to the greater strategic division is still unknown. Nevertheless, many observers agree that whatever changes may take place, a multi-polar world and multilateralism prevail. The reasons or logics supporting multilateralism are mainly based on the fact that no one country can really address the security issues embedded with international dimension, no one country has the capacity to adapt and adopt to new changes alone, and it needs cooperation and coordination among the nation states and relevant stakeholders including the private sector and civil societies. Large scale interstate war or armed conflict is **unthinkable** in the region due to the high level of interdependency and democratization. It is believed that economic interdependency can reduce conflicts and prevent war. Democracy can lead to more transparency, accountability, and participation that can reduce collective fears and create more confidence and trust among the people in the region. In addition, globalism and regionalism are taking the center stage of national and foreign policy of many governments in the region except North Korea. The combination of those elements of peace is necessary for peace and stability in the region and those elements are **present and being improved in this region.**

## DA

### DOE Aid Now

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

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

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

### 2AC Renewable Tradeoff DA

#### No renewables now---gas

Kevin Doran 12, institute fellow and assistant research professor at the Renewable and Sustainable Energy Institute (RASEI), a joint institute of the National Renewable Energy Laboratory and the University of Colorado at Boulder. His research focuses on the legal, regulatory and public policy dimensions of energy development. Adam Reed is a research associate at RASEI, Natural Gas and Its Role In the U.S. Energy Endgame, 8-13-12, <http://e360.yale.edu/feature/natural_gas_role_in_us_energy_endgame/2561/>

The natural gas boom also presents the prospect of imminent harm to the deployment of renewable energy, and dire environmental consequences that will follow from a failure to cease adding greenhouse gases to the atmosphere. The growing swell toward a utility sector dominated by natural gas **has already resulted in collateral damage throughout the renewables industry.** Wind, for example, had previously been capable of competing with natural gas generation on a cost basis, thanks to advances in technology and a federal production tax credit that seems poised to expire at the end of this year. Installation of new renewable energy facilities has now all but dried up, unable to compete on a grid now flooded with a low-cost, high-energy fuel that can provide power on demand. What little support there is for renewables is mostly found in state renewable portfoli

#### Nuclear revival now

Silverstein 2/20 Ken, Forbes, "Despite Difficulties, Nuclear Energy Will Regain Strength", 2013, [www.forbes.com/sites/kensilverstein/2013/02/20/despite-difficulties-nuclear-energy-will-regain-strength/](http://www.forbes.com/sites/kensilverstein/2013/02/20/despite-difficulties-nuclear-energy-will-regain-strength/)

The Japanese nuclear accident in March 2011 may have knocked out the sector’s wind. But the industry now says that it has regained its momentum. Here in the United States, five new plants are expected to be operational by the end of the decade while internationally, 70 such facilities are planned.¶ Nuclear energy advocates are still battling the same longtime foes. But the industry feels that once the new plants with modern safeguards get up and running, those facilities will prove their value. The harder sell, right now, is the financial justification. Why spend $10-$15 billion to build a new nuclear facility when market conditions now favor combined-cycle natural gas plants that are much cheaper and easier to permit?¶ “The long-term fundamentals continue to support this technology,” says Marvin Fertel, chief executive of the Nuclear Energy Institute, before Wall Street analysts. He adds that the average capacity factor — a measurement of operational efficiency — has been about 90 percent for the past decade. Further, the uranium to fuel those reactors is plentiful while the environmental impact is relatively benign.¶ The utilities with active construction efforts are Southern Company, Scana Corp. and the Tennessee Valley Authority. Southern Co. and its partners are building two new units where two other other nuclear reactors now reside. The total price tag is estimated at $14 billion. Of that, the partnership will snag an $8 billion loan guarantee while it puts up $6 billion of its money.

#### DOD energy projects don’t trickle down

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

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

#### Nuclear’s not zero-sum with renewables investment---there’s enough to go around

Kerekes 7 Steven, Senior Director of Media Relations at the NEI, "Nuclear Power in Response to Climate Change", November 9, www.cfr.org/energy/nuclear-power-response-climate-change/p14718

So it’s a complete myth that Michael’s preferred technologies haven’t gotten the money. They have. In fact, nuclear and renewables make a nice, emission-free combination. Of course, renewables cannot meet baseload, 24-hour a day, seven-day a week electricity demand. Nuclear power can. Our industry average capacity factor—which measures actual electricity production relative to theoretical production non-stop for a full year—has been right around 90 percent for the past seven years. By comparison, the Department of Energy pegs the average capacity for state-of-the-art wind projects at 36 percent, with older projects lagging at 30 percent or lower.¶ I agree that it’s prudent to use limited resources wisely. Yet the investment resources for energy technologies aren’t as limited as Michael thinks. Morgan Stanley Vice Chairman Jeffrey Holzschuh has a presentation in which he notes that the U.S. utility industry investment needs for the next thirteen years total about $1 trillion. Of that total infrastructure need, $350 billion, or $23 billion per year, is needed for electric-generating facilities. Of that sum, the capital required to build an additional 15,000-20,000 megawatts of nuclear capacity over the next fifteen years is about $3.5 billion per year. Meanwhile, over the past five years, the investment capital raised by the U.S. power industry has ranged between $50 billion and $79 billion annually. In other words, new nuclear plant construction will barely make a dent in the ability of U.S. capital markets to finance new energy projects.¶ This is not an “either-or” scenario. We need all these emission-free energy technologies. The fact that nuclear energy has proven its value as a reliable, affordable source of clean energy is cause for hope.

#### Alternatives to nuclear suck---renewables fail

Klein 12 Andrew C, Professor of Nuclear Engineering and Radiation Health Physics at Oregon State University, “Required Infrastructure for the Future of Nuclear Energy”, *Federation of American Scientists*, February, www.fas.org/pubs/\_docs/Nuclear\_Energy\_Report-lowres.pdf

So what’s the best substitute for nuclear power? Again, that depends on your criteria and timeframe. Fossil-fueled power from coal or gas offers proven technology, relatively low cost, and fuel availability for decades or longer. Gas plants are quick to construct and could readily replace aging nuclear plants. But in a world experiencing rapid climate change, fossil-generated energy is a step backward from necessary reductions in greenhouse-gas emissions. The one large-scale, mature-technology renewable replacement for nuclear power is hydroelectricity—but in the United States there’s little potential for growth in hydro. Geothermal energy is limited to a few geographical regions and cannot make major inroads into that 800-TWh per year of nuclear electricity. Biomass, while potentially significant for transportation, is unlikely to see greatly increased use for generation of electricity. Renewable energy from wind and the Sun is abundant and has minimal—but not zero—environmental impact. Wind is becoming competitive with conventional energy sources, and growth in the wind industry has brought wind to a 2-percent share of U.S. electricity generation, a figure that is rising rapidly. Solar-thermal and photovoltaic technologies are farther behind economically, but their advantages are similar to those of wind. Both wind and solar challenge the power grid with their intermittent generation, and increased use of these renewable energy technologies would require an enhanced and smarter electric grid. Finally, advanced nuclear technologies could replace today’s fission reactors while essentially solving the nuclear waste problem. But they’re decades away.

#### Renewables fail to solve warming---storage

Dallas Kachan 13, A former managing director of the Cleantech Group, Dallas Kachan is executive director of the international Clean Mining Alliance. He is also managing partner of Kachan & Co., a cleantech research and advisory firm that does business worldwide from San Francisco, Toronto and Vancouver., “Predictions for Cleantech in 2013,” 1-16-13, <http://www.environmentalleader.com/2013/01/16/predictions-for-cleantech-in-2013/>

Put aside for a moment the margin erosion, allegations of corruption, international trade shenanigans and other unfortunate short-term realities in today’s solar and wind markets. There’s a bigger, more systematic threat to their growth rates looming.¶ Expect to see recognition in 2013 about the risk to solar and wind growth rates posed by **disappointing progress to date in grid-level storage**. Large-scale storage, whether chemical or mechanical, is turning out to be harder and more expensive than previously thought. And **without it**, intermittent clean energies like solar and wind **can only be so useful and meet only a relatively small portion of power demand.**

#### Plan solves warming

Palley 11 Reese, The London School of Economics, 2011, “The Answer: Why Only Inherently Safe, Mini Nuclear Power Plans Can Save Our World”, p. 186-90

The central investigation of this book has been directed at the scale of the nuclear industry. The book has argued that all anthropogenic challenges that put in question continued human existence on Earth are a matter of scale. It was nature’s unanticipated success with her human experiment, the evolutionary choice of brains over brawn, setting in motion the underlying scale problems that opened our Pandora’s box of calamities. The history of man on Earth can best be viewed as a race between population and resources in which, for some millennia, population expansion leads and the Earth’s resources have been straining to catch up. When population bloomed from 100 million brainy humans to a billion, the problems of scale emerged as the price we had to pay for success as a species. The conversion of forests to agriculture, responding to the need to feed a burgeoning population, initiated the emerging problem of scale. The elimination of oxygen-emitting forests was mitigated to a large measure in the beginning of our population growth by the slow rate of change of the deforestation, which allowed an absorbable increase of CO2 in the atmosphere. Natural processes, such as the ability of the oceans to take up CO2, tamped down global warming. But as the scale of the release of warming gases exploded a few hundred years ago, our remaining forests and our seas, our first line of defense against CO2 imbalance, could not cope and the level of CO2 has risen alarmingly each year since 1800. When human population climbed from a billion to six billion and these six billion reveled in the enormous energy content of coal, the scenario for disaster on a global scale came into play. The impact of the loss of forest paled in comparison to the havoc that the use of fossil fuels represented. In a world that was hungry for energy and, not incidentally, living on a Malthusian edge of food supply, coal burst upon us as manna from heaven. Coal was everywhere, easy to mine, and in enormous, almost unending supply It generated the cheap heat needed to run the engines of early industrialization. An unintended Faustian bargain was struck. The immediate cost of coal in the cities, dirt and pollution, were not out of sync with what urban man had lived with for centuries. It was beyond the science and the understanding of the time that burning vast millennial coal deposits would do little more than discommode the proximate few and benefit many. Again it was not the burning, it was the scale of the burning that dumped billions of tons of CO2 into the atmosphere. We are now presented with a horrendous invoice that must be paid if we are to survive in anywhere near the comfort to which we have become accustomed. It has been the intent of this book to argue that the scale of the warming catastrophe must be viewed primarily in terms of the continuing flow of CO2 into the atmosphere. Every possible source of CO2, no matter how small, must be identified and interdicted, since every fourth molecule of the gas will remain with us as a climate moderator for thousands of years. What we find is that all of the sources of energy including so-called green energy are CO2-culpable and that each, in spite of claims to the contrary, adds its tiny mite or enormous mass to the climate changes looming in man’s future. The book argues that the scale of the consumption of fossil fuels is clearly unsustainable and, more to the point, that the feeble attempts to restrict CO2 production are little more than a glossing over of the problem. Capping but not ending production of greenhouse gases only magnifies the unthinkable future costs of bringing the level of CO2 and other greenhouse gases back into balance. Logic dictates that merely limiting greenhouse gases pushes possible solutions farther and farther into the future and does little to mitigate the difficulties that will arise in the near future. Logic dictates that our reasonably comfortable survival depends on the immediate and total cessation of increases to parts per million of CO2 in the air. Logic dictates that if we are to continue to enjoy the level of comfort, wealth, and ease afforded us since the beginning of the twentieth century we must not only halt the increase but commence the actual decrease of warming gases at work in the atmosphere. That conclusion brings the book to the problems and the solutions inherent in nuclear power, the only energy source that can guarantee us a reasonable future that might be resistant to CO2 warming. Here the argument returns once again to the problem of scale of nuclear reactors, especially as the size of these reactors is related to the brief time left to us to get a grip on calamitous climate changes. The beginnings of nuclear energy lay in the demands of war. The battle between good and evil characterized by the Second World War gave hurried birth to a discovery that had the inherent power to both destroy and salvage. The power to destroy required plutonium on an enormous scale, which was projected forward into the postwar development of civilian reactors. The demand for scarce plutonium for the bombs of the cold war defined the type of reactors that were being developed. These were the breeder reactors, which spewed out plutonium measured in tons that had previously been available only in ounces, and would continue to do so when the wartime need was far behind us. What was once precious, rare, and desirable has become dangerous nuclear waste, and the imperfectly perceived scale of the waste problem has seriously inhibited the logical growth and development of nuclear power. By some unthinkable universal coincidence, nuclear power became available to man for war at the same time that it could prove to be the solution to man’s greatest peacetime challenge. But the gigawatt nuclear power plants that emerged from the war had within them the seeds of their own severe limitation. The scale of the risks, real and imagined, grew exponentially as the scale of energy output grew only linearly. These risks, some merely perceived, some dangerously real and some financial, have conspired to restrict the enormous expansion of nuclear power that is needed to quickly replace our present consumption of energy from fossil fuels. The present rate of replacement of fossil with nuclear sources is at a pace that will have little impact on ultimately dealing with the CO2 imbalance. This slow rate of change is compounded of public fears, bureaucratic regulatory mechanisms resistant to novel solutions, and a private capital market that is unable to conjure with the imagined and real risks of the huge gigawatt reactors that dominate the industry. It is a Gordian knot that cannot be unraveled but which can only be cut by a political sword that, alas, still lacks the edge to do the job. By another rare act of cosmic fortuity, there is a parallel existing nuclear technology that, barring political interference, is capable of addressing the scale problems inherent in gigawatt reactors. From the beginning of the nuclear era, researchers such as Weinberg and Wigner and Teller developed small, inherently safe nuclear reactors that did not breed plutonium. This was reason enough for the military, balancing urgent demands on research and development budgets, to consign the concept of “smaller and safer is better” to dusty shelves in our national science attic. This book has argued that small reactors, that produce a tenth of the energy of the giants also generate inordinately less of the risk that inhibits growth of the industry. Construction of small reactors is a fraction of the cost of construction of gigawatt reactors. Thus the number of years that scarce capital is tied up and at risk is substantially reduced. The book argues that a 100 MWe reactor88 is a much bigger hardware bargain than a gigawatt reactor, which, from start to output, can cost $15 billion. It is not only the hardware costs that contribute to the devilish details of risk. The problem is the inability of the market to accurately or even approximately estimate the real cost of the capital that would be tied up for over a decade in a project that, through technological advancements, could be obsolete before it ever joins the grid.

### 2AC Immigration DA

#### Won’t pass

Altman 3/20 [Alex Altman, Washington correspondent for TIME, “Four Hurdles That Could Block Immigration Reform,” http://swampland.time.com/2013/03/20/four-hurdles-that-could-block-immigration-reform/]

The next few months offer the best chance in a generation for the two parties to solve a problem that has bedeviled Congress like few others. Both sides agree the U.S. immigration system is broken. Both would seem to gain from a deal that clears a pathway out of legal oblivion for the nation’s 11 million illegal immigrants. Support is building for a landmark pact. But while negotiations are progressing in both the House and Senate, an agreement is a long way off. As the talks grow more detailed, obstacles to a deal may begin to emerge:¶ Problem #1: The Gang of Eight¶ The first snag lurks in the Senate, where the so-called Gang of Eight has huddled privately since the election in hopes of hammering out a bill. Members have crafted a set of measures that would create a pathway to citizenship for the nation’s estimated 11 million undocumented immigrants within about 13 years while requiring them to register with federal authorities, pay back taxes and fines, learn English and undergo background checks. The deal, both sides agree, would also beef up border security and determine how the future flow of immigrants will be regulated to match the needs of the economy.¶ The Gang’s closed conclaves have been marked by Vatican-style secrecy, often a sign of progress in a town where silence is rare. The Gang’s members – Republicans Marco Rubio, Lindsey Graham, John McCain and Jeff Flake, and Democrats Chuck Schumer, Dick Durbin, Bob Menendez and Michael Bennet – have, by all accounts, developed a rapport. “You can tell by the tone of their voices,” says an elected Democrat briefed on the progress of the private talks.¶ But the broad themes are the easy part. The full bill will stretch to hundreds of pages, each peppered with detailed provisions that could spike it. Members bring clashing political imperatives and ideologies to the talks. Rubio, for example, is trying to repair the GOP’s tattered image with Hispanic voters without sparking a backlash among the movement conservatives he’d need in a presidential bid. Graham, who faces a probable primary challenge in 2014, has a habit of basking in the bipartisan spotlight before bolting when negotiations intensify. The measure of the Gang of Eight’s success isn’t whether they are aligned at the start of their talks. It’s whether they are all aligned at the end.¶ Problem #2: The Lobbyists¶ A few years ago, an impasse between the leaders of the Chamber of Commerce and the AFL-CIO helped scupper an immigration-reform bill backed by President George W. Bush. At that time, business and labor could not agree on how many visas to grant low skilled workers who make the construction, agriculture and hotel and restaurant industries hum. The Chamber wanted cheap labor, but didn’t want workers to stay; unions were concerned about protecting citizens’ jobs. Soon after, reform collapsed.¶ This time the two groups have nurtured an unlikely alliance. “There has been a sea change,” says a labor source close to the discussions. Nudged by Graham and Schumer, the two lobbies released a set of shared principles, including one stating that Americans should get “first crack” at available jobs and that businesses should have the flexibility to hire to meet the demands of the market. But history could repeat itself again. The two sides call for a new federal agency charged with setting visa levels, but they have yet to agree on who’s eligible or how the new bureau will work. The issue of future flow has been a stubborn sticking point before. And it is as easy to imagine conservatives balking at efforts to create a new government agency as it is to foresee unions drawing a line at a small number of foreign workers.¶ Problem #3: House Republicans¶ Even if Senate negotiators can come up with a package to get 60 votes in the upper chamber, “the question continues to be, how does it get through the House?” says Frank Sharry, an expert on immigration reform. As in the Senate, a bipartisan cluster of eight representatives from across the ideological spectrum have been secretly meeting for months. Congressman Luis Gutierrez, an Illinois Democrat who has long been a leader on immigration reform, is full of praise for the new tack taken by his Republican counterparts. But, he acknowledges, “You still have to put those votes on the board, and that’s going to be a real, real test in the House of Representatives.”¶ For their part, Republicans say the party’s old dogma, which held that illegal immigrants should self-deport and then go to the back of the line, is not viable policy. Even many immigration hard-liners say they want to help shape comprehensive reform. “It’s time for us to belly up to the bar,” says Ted Poe, the Texas Republican who chairs the House immigration reform caucus. But for conservatives, amnesty remains a dirty word. “A bill that’s basically amnesty, that says you’re here and you’re going to be a citizen — those two things are not going to come out of this conservative House,” says Poe. Even citizenship is charged enough that Republican Senator Rand Paul, who gave a speech March 19 backing a path to legalization for undocumented immigrants, avoided using the term. Many House Republicans, including several in the Judiciary Committee through which a bill must pass, have a long history of antipathy to amnesty, and only a grassroots rebellion to fear as next year’s primaries approach.¶ Then there is the reality that even if Republicans were to be widely supportive of amnesty, very few of those new citizens are likely to abandon the Democratic Party anytime soon. “Republicans face a choice: do they ditch their principles and go all out in a failing attempt to outpander Democrats?” asks Rosemary Jenks, director of government relations at NumbersUSA, which advocates for lower immigration levels. “It’s becoming very clear to Republicans in Congress that this is not going to get them the Hispanic vote.”¶ Problem #4: The Democrats¶ Little discussed but also looming is the possibility that Democrats drag their feet on reform. Liberals will balk if the path to citizenship is too long or too onerous, or if enforcement provisions are too rigid. Many conservatives also suspect that Democratic power brokers, despite their daily hammering of Republicans to get moving on immigration reform, would privately prefer to keep the issue as a cudgel than actually pass a law. Barack Obama “wants to make a bill come out of the Senate that is so far out there that it would never pass, so that he can blame us for not being compassionate and use the issue to take back the House in 2014,” says a House Republican. Even some liberals see this as a plausible scenario. “There’s always a lingering doubt in my mind,” admits one House Democrat. Obama knows that putting his fingerprints on the deal is an easy way to kill it; when a draft of his proposal leaked in the press, he called Republican negotiators individually to apologize. But if negotiations in Congress bog down, he may not be so hands off.¶ By all accounts, negotiators are making genuine progress toward a landmark deal that builds on a foundation laid during its last fumbled attempts. But lawmakers still have to thread a bill through a thicket of obstacles in a bitterly divided Congress. Sources close to the negotiations say they expect both chambers to introduce legislation in early April, giving Congress several months to haggle out a pact before members scatter for their summer recess. It sounds like plenty of time, but it’s not. Immigration will have to jockey for attention this spring with gun control, budgets and a potential grand bargain on tax and entitlement reform. Meanwhile, the human cost of the political stalemate is high. Each day, 1,400 undocumented immigrants are deported.

#### Won’t pass---border security

Byron York 3-27, Chief Political Correspondent - The Washington Examiner, “Border security in exchange for immigration reform? Napolitano says no deal.” 3-27-13, http://washingtonexaminer.com/border-security-in-exchange-for-immigration-reform-napolitano-says-no-deal./article/2525505

Republicans working to craft a comprehensive immigration reform bill say there is one rock-bottom requirement for any deal: The border must be secure, and proven to be secure, before any path to citizenship is created for the millions of immigrants currently in the country illegally. That is the one non-negotiable GOP demand. And on Tuesday, Homeland Security Secretary Janet Napolitano flatly rejected it.¶ “Relying on one thing as a so-called trigger is not the way to go,” Napolitano told a breakfast meeting of journalists. Asked about her department’s recent revelation that it will not produce a long-promised method of measuring border security, known as the Border Condition Index, Napolitano said, “We’re confident that the border is as secure as it’s ever been. But there’s no one number that captures that.” Without a way to measure border security, many Republican reform advocates say, there’s no way to go forward with a reform agreement.¶ Napolitano’s comments were one more bit of evidence, if Republicans needed any, that the Obama administration does not intend to make enhanced border security a precondition of immigration reform. “Every position and action the administration takes is consistent with the idea that they have no desire to accomplish immigration security,” said one GOP Senate aide who spoke on condition of anonymity.¶ “One of the challenges in crafting any reform is that the American people do not have confidence in this administration’s willingness to enforce current immigration law,” said Alex Conant, spokesman for Marco Rubio, the Republican senator and Gang of Eight member who has staked considerable political capital on the negotiations. “Senator Rubio and several members of the immigration working group share these concerns, and it’s reflected in the solution they are trying to craft. Our legislation will include real security triggers to make sure out borders are secured.”¶ Added Conant: “Senator Rubio will not support any legislation that does not include real security triggers to make sure our borders are secured.”¶ As for Napolitano, another aide said, “I wonder if she’s freelancing, or carrying a message from the White House.” At Tuesday’s White House briefing, spokesman Jay Carney was asked that very question, and while he spoke at length without saying anything definitive, Carney appeared to suggest that President Obama agrees with Napolitano. From the transcript:¶ QUESTION: Secretary Napolitano said today that triggers are not necessary before comprehensive immigration reform. So what does the White House do to convince those on the other side? Since there are no reliable metrics about border security, what will you do to convince them that the border is secure enough for immigration and a path to citizenship to begin?¶ MR. CARNEY: Well, I think the question is excellent, and I would note that what Secretary Napolitano has said — Secretary Napolitano has said that the Department of Homeland Security measures progress using a number of metrics to make sure we are putting our resources where they will have the most impact. And I think that while there are different ways to look at this issue, the fact is, by a host of measures, there has been great improvement in our border security.¶ Certainly the facts are there when it comes to the resources that have been applied to border security — the doubling of border security agents, as well as the other metrics that you will often hear Secretary Napolitano or others discuss. So we look at a variety of measures.¶ And I think you can look at what this President has committed to and the record on border security since he came into office to evaluate his assertion that border security is a vital element of comprehensive immigration reform. That has been his position, and it continues to be. And I would note — and this is something that has been acknowledged by important members of the Senate, Republican members — the progress that has been made on this very important issue, border security. Much of — the last time comprehensive immigration reform was essentially abandoned, some of the issues — the principal reason for that was because of concerns about border security. And many of the metrics that were put forward then have been met — the goals and the targets that were said to have to be achieved before we could move forward have been met.¶ But this is an ongoing issue. This is an ongoing concern, and it’s an ongoing project of this administration. And it will certainly be an important part of immigration reform.¶ QUESTION: Do you — does the White House oppose commissions or certain triggers before a path to citizenship can begin?¶ MR. CARNEY: What we have said and I’ll say today is that we are not going to judge the bill before it’s been written. And we are working with the senators who are in the Gang of Eight as they make progress, and they’ve made considerable progress, and that is worth noting. Senator Schumer just the other day talked about where they are in that process and the progress that they’ve been making, and we were heartened by that.¶ But as the President said yesterday, we have to keep pushing. We have to make sure that we follow through on this progress, and that that progress leads to a bill that has bipartisan support and that can be signed by this President. And we’re not there yet. Progress is being made. It’s being made in the Senate, which is where the President hoped it would be made. And we are very much monitoring that process and engaging in that process. But it’s not done yet, and I don’t want to prejudge a bill that hasn’t been written.¶ QUESTION: But if I could just press you on it, it does appear as though that Secretary Napolitano did today prejudge. She said the triggers are not necessary. Does the White House agree with that assessment?¶ MR. CARNEY: I think what she was saying — and the assessment we do agree with — is that there are a variety of metrics by which you can measure, and we do measure, progress on border security. And these are metrics that others use to measure border security, including Democrats and Republicans in the Senate and beyond the Senate, beyond the Congress.¶ So we’re working with Congress on this, with the Senate on this. Progress has been made. Border security is one of the key principles that the President has put forward that has to be part of comprehensive immigration reform. He has demonstrated his seriousness on this issue, as has Secretary Napolitano. But it is something that we’re — it’s not a done project. We have to continue working on it.¶ Cut through all the verbiage, and Carney seemed to say precisely what Napolitano said: If Republicans demand that tougher border enforcement be a precondition for comprehensive immigration reform, they can forget about making a deal, now or ever.

#### Perez nomination pounds the link

NPR 3-27-13, Carrie Johnson, “Obama's Labor Nominee Faces GOP Opposition Over His Role In A Supreme Court Case”, http://www.npr.org/blogs/thetwo-way/2013/03/27/175513560/obamas-labor-nominee-faces-gop-opposition-over-his-role-in-a-supreme-court-case

Thomas Perez, the president's nominee to lead the Department of Labor and a high-profile Latino advocate for civil rights, is scheduled for a Senate confirmation hearing April 18. **But behind-the-scenes wrangling over his nomination, and his controversial role in a Supreme Court case, is already well under way.**¶ House Oversight and Government Reform Committee Chairman Darrell Issa, R-Calif., and the ranking GOP member on the Senate Judiciary Committee, Charles Grassley, are investigating what they call a quid pro quo deal that may have cost the federal Treasury as much as $180 million.¶ The GOP lawmakers are upset by the appearance that the Justice Department used inappropriate reasons to stay out of a whistle-blower lawsuit that claimed the city of St. Paul, Minn., had misused funds it got from the Department of Housing and Urban Development. Under the False Claims Act, the Justice Department can intervene in such cases and support whistle-blowers, which often leads to victories or settlements that return millions of dollars to the U.S. Treasury.¶ Under the GOP theory, the Justice Department declined to throw its weight into that whistle-blower case as part of an improper deal with St. Paul, Minn. What's the other end of the alleged quid pro quo? That would be St. Paul agreeing to withdraw its bid for Supreme Court review in a separate case that put at risk a major legal tool the federal government uses in civil rights and housing discrimination cases.¶ In the case, Magner v. Gallagher, St. Paul asked the Supreme Court to consider the government's use of the so-called disparate impact theory, which allows lawsuits to proceed under the Fair Housing Act if people can prove a practice has a statistically significant negative impact on minorities, rather than specific bad acts involving individual landlords. That theory has been a frequent target of political conservatives and some members of Congress, and its supporters fear if the issue gets to the Supreme Court, it could be invalidated there.¶ Republican lawmakers have demanded more answers from Perez, the assistant attorney general for civil rights, and others in the Justice Department who may have played a role in that decision, which they consider a "dubious bargain."¶ Grassley told reporters earlier this month, "It's hard to believe that the president would nominate somebody at the heart of a congressional investigation and so deeply involved in a controversial decision to make a shady deal with the city of St. Paul, Minn."¶ New documents indicate Perez and other top DOJ officials have spent hours talking to members of Congress behind closed doors this month about that arrangement.¶ Perez told investigators in an eight-hour session on March 22 that the St. Paul case heading to the Supreme Court last year "caught my attention and was a source of concern."¶ In the first explanation of his role in the case, Perez said the dispute headed toward the Supreme Court presented some bad facts, and "because bad facts make bad law, this could have resulted in a decision that undermined our ability...to protect victims of housing and lending discrimination." He told lawmakers he reached out to people in Minnesota and found out they were interested in getting the Justice Department to stay out of a separate whistle-blower case that could cost the state money.¶ Perez said he reached out inside the Justice Department for ethics advice and told lawmakers he learned "there would be no concerns so long as I had permission" from counterparts in the civil unit handling the whistle-blower case and that "there was no prohibition on linking matters."¶ He added that he learned former Vice President Walter Mondale, who played a role in sponsoring the Fair Housing Act in Congress, and who had close ties to the mayor of St. Paul, was going to reach out regarding the Supreme Court case and its effects on civil rights enforcement as well.¶ "I believe then, and I believe now, that the result achieved here was in the best interests of the United States," he said.¶ Justice Department officials have turned over 1,500 pages of documents about the controversy, **but that's unlikely to satisfy Republicans on Capitol Hill.**

#### Gun control pounds

WaPo 3-28, “Obama, pushing gun-control agenda, says ‘shame on us if we’ve forgotten’ Newtown,” http://www.washingtonpost.com/politics/obama-pushing-gun-control-agenda-says-shame-on-us-if-weve-forgotten-newtown/2013/03/28/e2060b54-97be-11e2-b68f-dc5c4b47e519\_story.html

President Obama delivered a **forceful** and emotional **plea** to lawmakers Thursday to pass his **gun-control agenda**, saying “shame on us if we’ve forgotten” the elementary school massacre in Newtown, Conn.¶ Frustrated by the slow pace of progress on Capitol Hill, Obama urged passage of universal background checks and other gun-control measures while flanked by mothers of shooting victims in the East Room of the White House. He also repeatedly invoked the Dec. 14 shooting at Sandy Hook Elementary School as a cause for action.¶ “Less than 100 days ago that happened,” Obama said. “And the entire country was shocked. And the entire country pledged we would do something about it and this time would be different. Shame on us if we’ve forgotten. I haven’t forgotten those kids. Shame on us if we’ve forgotten.”¶ Obama — who spoke alongside Vice President Biden, the administration’s point person on guns — **is attempting to pressure wavering lawmakers** in advance of an expected **Senate vote next month** on his guns agenda. He urged Americans to “raise your voices and make yourselves unmistakably heard” so that lawmakers “don’t get squishy.”¶ “We need everybody to remember how we felt 100 days ago and make sure that what we said at that time wasn’t just a bunch of platitudes, that we meant it,” Obama said.¶ But **the fate of gun legislation** on Capitol Hill **is murky amid GOP opposition and wavering among conservative Democrats.** Sen. Marco Rubio (R-Fla.), widely viewed as a 2016 presidential contender, announced Thursday that he was joining three other Senate GOP conservatives — Ted Cruz (Texas), Mike Lee (Utah) and Rand Paul (Ky.) — in **threatening to filibuster** Democratic gun-control legislation.

#### Infrastructure rules pound

Katie Fahrenbacher 3-15, “Obama starts unveiling his plans for climate change, clean energy,” 3/15/13, http://gigaom.com/2013/03/15/obama-starts-unveiling-his-plans-for-climate-change-clean-energy/

President Obama called for stronger action on climate change and support of clean energy research during his State of the Union speech, and now he’s showing his cards for how he might carry that out. On Friday Obama is expected to propose funneling $2 billion worth of federal leases for oil and gas companies into research and deployment of cleaner vehicles, reports the New York Times. At the same time, Bloomberg reports that Obama could also use a law from the Nixon-era to tell federal agencies that they need to consider climate change impacts before approving infrastructure projects like oil pipelines. ¶ The moves show how Obama is getting creative at a time when Congress isn’t likely to approve budget increases for clean energy support, or other policies like a cap and trade program or carbon tax. The stimulus package, which injected some $90 billion into clean energy projects and incentives, has largely been spent or the funds expired, so clean energy companies and projects are facing a steep drop in federal support in 2013. ¶ Yet, many will note that the moves are piece meal and not as aggressive as Obama originally proposed when he first ran for office. And some of Obama’s concessions to the natural gas and oil industry will likely anger environmentalists and some clean energy advocates. The Washington Post reports that the Obama administration plans to rewrite its proposal to regulate greenhouse emissions using the Environmental Protection Agency, making the proposal weaker and potentially delaying regulations. ¶ The proposal for using $2 billion in federal leases will emerge over the coming weeks. Obama brought up this plan in the State of the Union speech, calling it an Energy Security Trust that will drive new research and technology to shift our cars and trucks off oil for good. Obama said “If a non-partisan coalition of CEOs and retired generals and admirals can get behind this idea, then so can we.” ¶ The use of the infrastructure law is a new idea, and will no doubt prove controversial. A manufacturing association told Bloomberg that the notion had them “freaked out.” The law originally was used to protect water, air and soil from infrastructure projects that could have negative environmental effects.

#### Executive military action shields

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

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

#### SMRs are popular

Nelson and Northey 12 Gabriel and Northey, energy and environment reports for Greenwire, “DOE funding for small reactors languishes as parties clash on debt,” <http://www.eenews.net/public/Greenwire/2012/09/24/3>

It's not just wind and solar projects that are waiting for federal help as Congress duels over the importance of putting taxpayer dollars on the line for cutting-edge energy projects. Some of the nation's largest nuclear power companies are anxious to hear whether they will get a share of a $452 million pot from the Department of Energy for a new breed of reactors that the industry has labeled as a way to lessen the safety risks and construction costs of new nuclear power plants. The grant program for these "small modular reactors," which was announced in January, would mark the official start of a major U.S. foray into the technology even as rising construction costs -- especially when compared to natural-gas-burning plants -- cause many power companies to shy away from nuclear plants. DOE received four bids before the May 21 deadline from veteran reactor designers Westinghouse Electric Co. and Babcock & Wilcox Co., as well as relative newcomers Holtec International Inc. and NuScale Power LLC. Now the summer has ended with no announcement from DOE, even though the agency said it would name the winners two months ago. As the self-imposed deadline passed, companies started hearing murmurs that a decision could come in September, or perhaps at the end of the year. To observers within the industry, it seems that election-year calculations may have sidelined the contest. "The rumors are a'flying," said Paul Genoa, director of policy development at the Nuclear Energy Institute, in an interview last week. "All we can imagine is that this is now caught up in politics, and the campaign has to decide whether these things are good for them to announce, and how." Small modular reactors do not seem to be lacking in political support. The nuclear lobby has historically courted both Democrats and Republicans and still sees itself as being in a strong position with key appropriators on both sides of the aisle. Likewise, top energy officials in the Obama administration have hailed the promise of the new reactors, and they haven't shown any signs of a change of heart. DOE spokeswoman Jen Stutsman said last week that the department is still reviewing applications, but she did not say when a decision will be made.

#### Issues are compartmentalized---budget fight proves

Judson Berger 3-4, 2013, “Recurring budget crises could put squeeze on Obama's second-term priorities,” Fox News, <http://www.foxnews.com/politics/2013/03/04/recurring-budget-crises-could-put-squeeze-on-obama-second-term-priorities/#ixzz2OknXmt3G>

Rep. Luis Gutierrez, D-Ill., a vocal advocate for immigration reform, voiced confidence Monday that the administration and Congress could handle the busy agenda. ¶ "The spirit of **bipartisan cooperation that is keeping the immigration issue moving forward has not been poisoned by the sequester and budget stalemate**, so far," he said in a statement. "The two sets of issues seem to exist in parallel universes where I can disagree with my Republican colleagues strenuously on budget matters, but still work with them effectively to eventually reach an immigration compromise. ... I remain extremely optimistic that immigration reform is going to happen this year." ¶ Immigration reform efforts are still marching along despite the budget drama. Obama met last week on the issue with Sens. John McCain, R-Ariz., and Lindsey Graham, R-S.C., who both are part of a bipartisan group crafting legislation.

#### Obama has no PC

Matt Vespa 3-22, “CBS Political Director Now: Obama Shouldn't Agitate GOP; Back in January: 'Go For The Throat,' Mr. President,” 3-22-13, Read more: <http://www.newsbusters.org/blogs/matt-vespa/2013/03/22/180-turn-cbs-political-director-says-obama-shouldnt-agitate-gop-said-go-#ixzz2Ol8hnbXg>

http://www.newsbusters.org/blogs/matt-vespa/2013/03/22/180-turn-cbs-political-director-says-obama-shouldnt-agitate-gop-said-go-#ixzz2Ol8Ovmun

What happened in the interim? First, the president and the Democrats lost the sequester battle. Second, polling shows Americans tend to support the substance of Republican economic policies, even as the party label itself is, at present, not popular.¶ This, coupled with the hyperbolic scenarios related to the sequestration cuts, have allowed Republicans to highlight the real pork, such as the studying of duck genitalia, to slam the president lamenting over the closure of White House tours. Indeed, even self-described lefties are starting to lose confidence in Obama. In a recent Washington Post/ABC poll, the president saw liberals lose confidence in him over handling the economy over Republicans by fourteen points! Women’s support of his economic agenda slipped an equally bad twelve points since December.¶ Perhaps Dickerson was part of the liberal crowd that felt the president, fresh off his reelection, has a mandate, but was wholly illusory. ¶ Don't look for Dickerson's colleagues in the liberal media to examine this stunning reversal. Doing so would highlight that Obama fatigue is slowly but surely setting in, not just in Washington but in the hinterland. The president won a second term, but he lacks the political capital to set the agenda on his terms. He **cannot negotiate from a position of strength** because he has none. Dickerson now sees it, and surely others in the media do as well. The question is when will the media start to note openly that the emperor has no clothes.

#### PC’s not key to immigration

Hirsh 2/7 Michael, chief correspondent for National Journal, previously served as the senior editor and national economics correspondent for Newsweek, has appeared many times as a commentator on Fox News, CNN, MSNBC, and National Public Radio, has written for the Associated Press, The New York Times, The Washington Post, Foreign Affairs, Harper’s, and Washington Monthly, and authored two books, "There's No Such Thing as Political Capital", 2013, [www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207](http://www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207)

Meanwhile, the Republican members of the Senate’s so-called Gang of Eight are pushing hard for a new spirit of compromise on immigration reform, a sharp change after an election year in which the GOP standard-bearer declared he would make life so miserable for the 11 million illegal immigrants in the U.S. that they would “self-deport.” But this turnaround has very little to do with Obama’s personal influence—his political mandate, as it were. It has almost entirely to do with just two numbers: 71 and 27. That’s 71 percent for Obama, 27 percent for Mitt Romney, the breakdown of the Hispanic vote in the 2012 presidential election. Obama drove home his advantage by giving a speech on immigration reform on Jan. 29 at a Hispanic-dominated high school in Nevada, a swing state he won by a surprising 8 percentage points in November. But the movement on immigration has mainly come out of the Republican Party’s recent introspection, and the realization by its more thoughtful members, such as Sen. Marco Rubio of Florida and Gov. Bobby Jindal of Louisiana, that without such a shift the party may be facing demographic death in a country where the 2010 census showed, for the first time, that white births have fallen into the minority. It’s got nothing to do with Obama’s political capital or, indeed, Obama at all.

#### No PC loss from pushing nuclear

Hinckley 12 Elias, partner with the law firm of Kilpatrick Townsend & Stockton. Additionally, he is an adjunct professor of international energy policy at Georgetown University, “Hard Choices Ahead for US Energy”, <http://www.ourenergypolicy.org/wp-content/uploads/2012/03/EHinckley-policy-article.pdf>

What remains unclear is how policymakers will react. Some amount of policymaking support has been lost, as there has been simply too much discourse devoted to the potential hazards of nuclear power. However, the downside to continuing to champion the role of nuclear energy as part of a secure US energy future appears limited at this stage. There is little nationalized resistance and, as a result, no clear political cost to support nuclear policies, and possibly the benefit of the impression of proactivity on broad energy policy initiatives, and the results may be politicians continuing to champion nuclear power with no real expectation of new facilities being developed over the near or midterm.

#### Winner’s win

Hirsh 2/7 Michael, chief correspondent for National Journal; citing Ornstein, a political scientist and scholar at the American Enterprise Institute and Bensel, gov’t prof at Cornell, "There's No Such Thing as Political Capital", 2013, [www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207](http://www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207)

But the abrupt emergence of the immigration and gun-control issues illustrates how suddenly shifts in mood can occur and how political interests can align in new ways just as suddenly. Indeed, the pseudo-concept of political capital masks a larger truth about Washington that is kindergarten simple: You just don’t know what you can do until you try. Or as Ornstein himself once wrote years ago, “Winning wins.” In theory, and in practice, depending on Obama’s handling of any particular issue, even in a polarized time, he could still deliver on a lot of his second-term goals, depending on his skill and the breaks. Unforeseen catalysts can appear, like Newtown. Epiphanies can dawn, such as when many Republican Party leaders suddenly woke up in panic to the huge disparity in the Hispanic vote.¶ Some political scientists who study the elusive calculus of how to pass legislation and run successful presidencies say that political capital is, at best, an empty concept, and that almost nothing in the academic literature successfully quantifies or even defines it. “It can refer to a very abstract thing, like a president’s popularity, but there’s no mechanism there. That makes it kind of useless,” says Richard Bensel, a government professor at Cornell University. Even Ornstein concedes that the calculus is far more complex than the term suggests. Winning on one issue often changes the calculation for the next issue; there is never any known amount of capital. “The idea here is, if an issue comes up where the conventional wisdom is that president is not going to get what he wants, and he gets it, then each time that happens, it changes the calculus of the other actors” Ornstein says. “If they think he’s going to win, they may change positions to get on the winning side. It’s a bandwagon effect.”

#### Loss of PC still results in high-skill reform

Yglesias 1/15 Matthew, Slate, 2013, How the GOP Can Roll Obama on Immigration, www.slate.com/blogs/moneybox/2013/01/15/immigration\_reform\_will\_obama\_get\_rolled.html

Of the major policy issues under discussion in Washington, "immigration reform" stands out for having unusually undefined content. For the major immigration-advocacy groups, the goal is clear, a comprehensive bill that includes a path to citizenship for the overwhelming majority of unauthorized migrants already living in the United States. But many other aspects of immigration law are in the mix as part of a proposed deal, and it seems to me that there's a fair chance that a nimble Republican Party could essentially roll the Democratic coalition and pass an "immigration reform" bill that doesn't offer the path Latino advocacy groups are looking for.¶ Elise Foley has the key line from her briefing on the administration's thinking about immigration, namely that a piecemeal approach "could result in passage of the less politically complicated pieces, such as an enforcement mechanism and high-skilled worker visas, while leaving out more contentious items such as a pathway to citizenship for undocumented immigrants."¶ And indeed it could. But how can they stop it? The last House GOP effort to split the high-tech visas question from the path to citizenship question was an absurd partisan ploy. If Republicans want to get serious about it they should be able to make it work. The centerpiece would be something on increased immigration of skilled workers. That's something the tech industry wants very much, it's a great idea on the merits, and few influential people have any real beef with it. High tech visas will easily generate revenue to pay for some stepped-up enforcement. Then instead of adding on a poison pill so Democrats will block the bill, you need to add a sweetener. Not the broad path to citizenship, but something small like the DREAM Act. Now you've got a package that falls massively short of what Latino groups are looking for, but that I think Democrats will have a hard time actually blocking. After all, why would they block it? It packages three things—more skilled immigration, more enforcement, and help for DREAMers—they say they want. Blocking it because it doesn't also do the broad amnesty that liberals want and conservatives hate would require the kind of fanaticism that is the exact opposite of Obama's approach to politics.

#### XO’s solve

Whitesides 1-4 – John Whitesides, writer for Reuters, January 4th, 2013, "Obama Second-Term Plans Threatened By Bruising Budget Fights" www.huffingtonpost.com/2013/01/04/obama-second-term-plans\_n\_2411168.html

When blocked in Congress, Obama has shown a willingness to use executive orders and agency rules to make policy changes. During last year's campaign, **Obama ordered an end to deportations of young undocumented immigrants who came to the country as children and had never committed a crime**.¶ **This week, the** D**epartment of** H**omeland** S**ecurity changed its rules** to make it easier for undocumented immigrants to get a waiver allowing them to stay in the country as they seek permanent residency.

### AT: STEM/Biotech Impact

#### No STEM shortage

Schalin 12 [Jay Schalin, writer for the Pope Center for Higher Education Policy and former software engineer, “The Myth of STEM Labor Shortages,” May 31 2012, http://www.popecenter.org/commentaries/article.html?id=2701]

Everybody knows that the best way to get ahead today is to get a college degree. Even better is to major in one of the STEM (science, technology, engineering, and math) subjects, where the bulk of the jobs of the present and future lie. Politicians, business leaders, and academics all herald the high demand for scientists and engineers.¶ But they are, for the most part, wrong. The real facts suggest that, in many STEM specialties, there is a labor glut, not a shortage.¶ That is not to say that the STEM subjects aren’t worthy of study—there are many reasons to do so. And if a talented young person really wants a job in a STEM field, he or she can eventually get one, with a little perseverance.¶ But there is no urgent need for STEM graduates, at least not in a general sense.¶ The roots of STEM labor gluts go back over half a century, according to Michael Teitelbaum, a demographer at the Alfred P. Sloan Foundation and a leading authority on this topic. Sputnik, the 1957 Soviet missile launch, created a national concern that we were falling behind in the race for technical superiority. Talk of labor shortages in science and engineering arose, and talk led to action. Beryl Lieff Benderly, a journalist who writes about employment for scientists for Science magazine and other publications, described the result of the national response to Sputnik: “Federal money swiftly poured into science and engineering scholarships and so successfully attracted students that, by the early 1970s, the market for young scientists was flooded.”¶ The flood grew in the 1980s, after the National Science Foundation (NSF) warned of imminent shortages of scientists. Eventually, the NSF’s predictions turned out to be so off-base that the agency was subjected to an investigation by a House subcommittee in 1995, during which NSF director Neal Lane flatly stated, “there really was no basis to predict a shortage,” according to Teitelbaum and Benderly. (Lane was not involved with the NSF at the time of shortage prediction).¶ More recently, a PhD. in electrical engineering who follows labor trends in his specialty, Dan Donahoe, wrote for the Institute of Electrical and Electronic Engineers (IEEE) magazine that there has been a “myth of a qualified labor shortage” in his field for a long time. He says that the myth started in the late 1980s, and that the myth continues despite expansion and contraction of the labor market.

#### Biotech fails

Dr. Ayoub 7 received his B.Sc. in Human Biology from the University of Toronto, and his Doctorate of Medical Dentistry from Nova Southeastern University in Fort Lauderdale "The Biotech Industry: 30 Years of Failure, Starting with Genentech" Jan 9 seekingalpha.com/article/23696-the-biotech-industry-30-years-of-failure-starting-with-genentech

Biotechnology as a business arguably began with the birth of Genentech (DNA) 30 years ago in 1976. The company had a successful IPO four years later in 1980, which motivated a flurry of other biotech ventures to seek Wall Street’s vast wealth. These companies, which included Genentech, Chiron - now part of Novartis (NVS), Biogen - now Biogen Idec (BIIB), Amgen (AMGN), and Genzyme (GENZ), marked the beginning of a new revolution in medicine. ¶ This first wave of excitement for the biotech industry was full of hope as many argued that traditional pharmaceutical research, relying mostly on chemistry to formulate new drugs, would slowly succumb to the new fields of recombinant technology, molecular cloning, RNA interference, viral vectors, and other cutting edge sciences.¶ Many believed then, and many still do now, that pharmaceutical giants Pfizer (PFE), Johnson & Johnson (JNJ), Eli Lilly (LLY), Bristol-Myers (BMY), and others, could not possibly keep up with the wholly fragmented, albeit, singularly focused research of the many tiny biotech ventures springing up seemingly over night.¶ The evidence however points to the contrary; the biotech industry has failed so far.¶ In his new book, Science Business: the Promise, the Reality, and the Future of Biotech, Harvard business professor Gary P. Pisano provides **eye opening proof showcasing how the biotech industry has failed** in its attempt to function as a science-based business.¶ A Losing Industry ¶ Consider the following observation: from the year 1975 through 2004 the biotech industry as a whole has seen an increasing trend in sales, but total operating income before depreciation is essentially zero. In fact, if you remove the top ten companies; Amgen, Genentech, Genzyme, Gilead (GILD), Biogen, Biovail (BVF), Cephalon (CEPH), ImClone (IMCL), KOS Pharmaceuticals (KOSP), and Chiron, the rest of the biotech industry has lost more than $6 billion. On average it takes a biotech company 12 years after its IPO before it sees its first profit.¶ Many biotech companies continue the need for additional funding to take drug candidates through the pipeline. In 1990, biotechs made just as much money from secondary offerings as their IPOs. In 2004, secondary offerings provided double the funding that IPOs delivered.¶ This analysis does not even take into account the scores of privately held biotech ventures, which are surely losing more money than publicly traded companies. The biotech industry is a business in the red.¶ What about the biotechnology industry’s other promise, to deliver novel and cutting edge research? There was no difference in total productivity between the biotech industry and that of the big pharmaceutical companies over the last couple of decades.¶ While there is an increasing number of new drug candidates, fewer are making it to later stages. In fact, between the years 1998 and 2002, 48 percent of drugs in the pipeline were at the discovery stage. This is telling of the direction this industry is taking. New drug candidates require more initial funding. Little startups are hailing any research study that hints at a new drug candidate to attract new venture spending with less emphasis on quality. ¶ Biotechnology was also believed to bring drugs to the market through cheaper means. In fact, there is no difference in R&D spending per new drug between the two industries. Big pharma’s sales per R&D dollar spent was twice that of the biotech industry back in 1987, but was three times as much in 2004. So not only is big pharma more efficient at producing and selling, but the gap is increasing, not narrowing. There is no evidence that the biotech industry is learning.

#### Aff solves bioterror – diplomacy key

IFPA 9 Institute for Foreign Policy Analysis, January 1, "Finding the Right Mix: Disaster Diplomacy, National Security, and International Cooperation", www.ifpa.org/research/researchPages/DisasterDiplomacySRF.php

Foreign humanitarian assistance and disaster relief (HA/DR) operations—ranging from carefully planned medical aid and community development projects to emergency responses in the wake of earthquakes, tsunamis, hurricanes, and other natural disasters overseas—have become an increasingly prominent part of America’s diplomatic repertoire, and one in which its military forces are playing an ever more central role. Beyond their obvious humanitarian benefits, moreover, these operations can yield significant strategic value for the United States, as well as for its allies and coalition partners. Among other benefits, they can help eliminate sources of instability that terrorists and other irregular adversaries could exploit. They can also help build or restore cooperative military ties that may prove useful in other mission areas, provide regional powers with the chance to demonstrate new-found military capabilities in a non-provocative manner, and, perhaps most importantly, establish goodwill in areas where it had been latent at best. As a result, such operations can be vital tools for winning the “battle for hearts and minds” in areas where anti-American and/or anti-Western attitudes more generally have taken or could take root.¶ For these and related reasons, rising interest in HA/DR operations is also shared by U.S. allies and other partner states, especially in Europe and the Asia-Pacific area. As a result, the opportunities are ripe to advance disaster relief and other civil support missions as more potent tools of U.S. foreign policy that could be wielded unilaterally or in concert with like-minded nations. The key to success in either case is to achieve a greater unity of effort and a better division of labor among the diverse mix of civilian and military, national and international, and public and private sector entities that must work together as a team to execute such operations. This requires, in turn, a keener understanding of what unique skills and capabilities the military can bring to HA/DR efforts, how to ensure that these same skills and capabilities are ready and available where and when needed, and how to maximize their overall impact and contribution in the context of an interagency, civil-military, whole-of-government strategy.

#### Biotech industry expanding and resilient

John D. Carroll 10 is a biotech analyst with 32 years of prize-winning experience in journalism, “E&Y: A resilient biotech industry registers its first profitable year” Apr 28 http://www.fiercebiotech.com/story/e-y-resilient-biotech-industry-registers-its-first-profitable-year/2010-04-28

Ernst & Young has scanned the global biotech industry and found that established biotech hubs not only weathered 2009's scary economic downturn, they achieved a collective profitability for the very first time. But the big accounting firm wasn't ready to call for the champagne just yet.¶ The yawning gap between the industry's haves versus the have-nots is just as big as ever, small fish in the drug development pond face plenty of challenges obtaining operating cash and anyone trying to make it in biotech today will need to clear a very high bar.¶ "Biotech companies have long confounded predictions on their ability to survive difficult economic conditions and 2009 was no different," says Glen Giovannetti, Ernst & Young's global biotechnology leader. "Companies will continue to face a challenging funding environment for the foreseeable future. The firms best poised for success are those that can seize the opportunities latent in the near-universal need for increased efficiency--from capital efficiency to new approaches to R&D and creative models for funding and partnering."¶ In an interview this morning, Giovannetti told FierceBiotech that in the "New Normal" era, successful biotechs will learn how to distinguish themselves from the crowd. Mega-mergers have left fewer, and far more selective, buyers at the bargaining table. Venture capital groups have less cash on hand to invest. More of the VCs will use a project approach to development, selecting small teams to take a program to the point where they should either get wholly involved or just kill it. And developers will need to make a strong case early on that their therapeutic will be either significantly cheaper or much more effective than currently available meds.¶ The emphasis now, says Giovannetti, is on "how will this technology really differentiate itself in the marketplace?"¶ E&Y's report includes some key highlights, including:¶ Established biotech centers in the U.S., Canada, Europe and Australia achieved an aggregate net profit of $3.7 billion for last year. That's well up from the $1.8 billion loss recorded in 2008.¶ Public biotech companies, led by a handful of star players, raised 42 percent more cash last year, with follow-on offerings ginning a considerable amount of that.

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## Case

### Heg Sustainable

#### Err towards sustainability

Wohlforth 7 (William Wohlforth, Daniel Webster Professor of Government in the Dartmouth College Department of Government, Unipolar Stability: The Rules of Power Analysis, [A Tilted Balance](http://www.harvardir.org/symposia/72/), Vol . 29 (1) - Spring 2007, http://hir.harvard.edu/index.php?page=article&id=1611)

The larger problem with conflating power-as-resources with power-as-influence is that it leads to a constant shifting of the goalposts. The better the United States becomes at acquiring resources, the greater the array of global problems it is expected to be able to resolve, and the greater the apparent gap between its material capabilities and the ends it can achieve. The result is an endless raising of the bar for what it takes to be a unipolar power. Samuel Huntington defined a unipolar state as one able “effectively to resolve all important international issues alone, and no combination of other states would have the power to prevent it from doing so.” This is an extraordinary standard that essentially conflates unipolarity with universal empire. Great European powers did not lose great power status when they failed to have their way, in, for example, the Balkans in the nineteenth century. In turn, the United States did not cease to be a superpower when it failed to overthrow Fidel Castro in the 1960s. The fact that Washington cannot prevent Hugo Chavez from thumbing his nose at US power is interesting and perhaps even important, but it does not have bearing on the polarity of the international system. Defining power as the ability to solve whatever global problem is currently in the headlines virtually guarantees highly volatile prognostications about polarity. This sort of headline chasing led to talk of “empire” in 2002 and 2003, just as it feeds today’s multipolar mania. Assessing active attempts by the United States to employ its power capabilities may well be the most misleading way to think about power. This approach inevitably leads to a selection bias against evidence of the indirect, “structural” effects of US power that are not dependent upon active management. Many effects that can be attributed to the unipolar distribution of power are developments that never occur: counter-balancing coalitions, Cold War-scale arms races, hegemonic rivalry for dominance, security dilemmas among Asian powers, and decisions by Japan and others to nuclearize. Clearly, assessing unipolarity’s potential effects involves weighing such non-events against the more salient examples in which active attempts to use power resources are stymied. But the selection bias goes much further. Not only are non-events downplayed in comparison to salient events that appear to demonstrate the powerlessness of the United States, but patterns of events that do go its way are often missed. Consider, for example, how often Washington’s failure to have its way in the United Nations is cited as compared to its experience in the IMF. And, even in the United Nations, a focus on highly contested issues, such as the attempt at a second resolution authorizing the invasion of Iraq, fails to note how the institution’s entire agenda has shifted to address concerns, such as terrorism, that are particularly important to the United States.

## Renewables DA

### Impacts

#### Nuclear war turns warming

Duncan Clark 9, editorial environmental consultant to the London Guardian, co-director of GreenProfile, January 2, 2009, “The carbon footprint of nuclear war,” online: http://www.guardian.co.uk/environment/blog/2009/jan/02/nuclear-war-emissions

Almost 700m [million] tonnes of CO2 would be released into the Earth's atmosphere by even the smallest nuclear conflict, according to a US study that compares the environmental costs of developing various power sources

Just when you might have thought it was ethically sound to unleash a nuclear attack on a nearby city, along comes a pesky scientist and points out that atomic warfare is bad for the climate. According to a new paper in the journal Energy & Environmental Science, even a very limited nuclear exchange, using just a thousandth of the weaponry of a full-scale nuclear war, would cause up to 690m tonnes of CO2 to enter the atmosphere – more than UK's annual total.

The upside (kind of) is that the conflict would also generate as much as 313m tonnes of soot. This would stop a great deal of sunlight reaching the earth, creating a significant regional cooling effect in the short and medium terms – just like when a major volcano erupts. Ultimately, though, the CO2 would win out and crank up global temperatures an extra few notches.

The paper's author, Mark Z Jacobson, a professor of civil and environmental engineering at Stanford University, calculated the emissions of such a conflict by totting up the burn rate and carbon content of the fabric of our cities. "Materials have the following carbon contents: plastics, 38–92%; tyres and other rubbers, 59–91%; synthetic fibres, 63–86%; woody biomass, 41–45%; charcoal, 71%; asphalt, 80%; steel, 0.05–2%. We approximate roughly the carbon content of all combustible material in a city as 40–60%."

But why would a Stanford engineer bother calculating such a thing? Given that the nuclear exchange would also kill up to 17 million people, who's going to be thinking about the impact on global warming?

The purpose of the paper is to compare the total human and environmental costs of a wide range of different power sources, from solar and wind to nuclear and biofuels. One of the side-effects of nuclear power, the report argues, is an increased risk of nuclear war: "Because the production of nuclear weapons material is occurring only in countries that have developed civilian nuclear energy programs, the risk of a limited nuclear exchange between countries or the detonation of a nuclear device by terrorists has increased due to the dissemination of nuclear energy facilities worldwide."

"As such," Jacobson continues, "it is a valid exercise to estimate the potential number of immediate deaths and carbon emissions due to the burning of buildings and infrastructure associated with the proliferation of nuclear energy facilities and the resulting proliferation of nuclear weapons … Although concern at the time of an explosion will be the deaths and not carbon emissions, policy makers today must weigh all the potential future risks of mortality and carbon emissions when comparing energy sources."

#### Nuke war outweighs warming

Harrell 9 quoting Robock, Rutgers professor who uses NASA data 1/22, Eben, Time, “Regional nuclear war and the environment”,http://www.time.com/time/health/article/0,8599,1873164,00.html

Some scientists, most notably Freeman Dyson of The Institute for Advanced Study in Princeton, have stirred controversy by arguing that nuclear weapons are a more urgent environmental threat than global warming. Do you agree? Yes. If India and Pakistan engaged in nuclear war, they would use about 0.3% of the global nuclear stockpile. And still the effects on the climate would be dramatic. Our calculations on nuclear winter from the early 1980s have been confirmed by modern climate models. And fundamentally the situation hasn't changed — even with reduced stockpiles there still exists enough weapons to cause nuclear winter. That's something that maybe people don't realize. I think we have to solve the problem of the existence of all these weapons before we have the luxury of worrying about global warming.

### No Tradeoff

#### Nuclear can work in conjunction with renewables---key to solve warming

Moore 6 Patrick, Leader in the international environmental field for over 30 years, co-founder of Greenpeace April 16, Going Nuclear: A Green Makes the Case http://www.washingtonpost.com/wp-dyn/content/article/2006/04/14/AR2006041401209.html

There are signs of a new willingness to listen, though, even among the staunchest anti-nuclear campaigners. When I attended the Kyoto climate meeting in Montreal last December, I spoke to a packed house on the question of a sustainable energy future. I argued that the only way to reduce fossil fuel emissions from electrical production is through an aggressive program of renewable energy sources (hydroelectric, geothermal heat pumps, wind, etc.) plus nuclear. The Greenpeace spokesperson was first at the mike for the question period, and I expected a tongue-lashing. Instead, he began by saying he agreed with much of what I said -- not the nuclear bit, of course, but there was a clear feeling that all options must be explored. Here's why: Wind and solar power have their place, but because they are intermittent and unpredictable they simply can't replace big baseload plants such as coal, nuclear and hydroelectric. Natural gas, a fossil fuel, is too expensive already, and its price is too volatile to risk building big baseload plants. Given that hydroelectric resources are built pretty much to capacity, nuclear is, by elimination, the only viable substitute for coal. It's that simple.

### No Commercialization

#### Military energy programs won’t be commercialized

Erwin 12 Sandra, National Defense Business and Technology Magazine, "Pentagon's Influence in Green Energy Innovation Overestimated, Study Says", 2012, www.nationaldefensemagazine.org/blog/lists/posts/post.aspx?ID=728

A new study casts doubts on the Defense Department’s ability to shape the nation’s clean-energy future.¶ The Pentagon three years ago launched an ambitious campaign to replace fossil fuels with renewables, reduce overall consumption of petroleum products and convert aging facilities into carbon-neutral buildings. Defense officials have touted these efforts as key to easing dependence on foreign oil imports and to lessen battlefield casualties from enemy attacks on fuel supplies. Administration officials, lawmakers and think tanks have praised the Pentagon’s green-technology push as a potential catalyst for a larger national effort to become more energy independent.¶ But in a study released March 28, a group of researchers and policy analysts concludes that there are today “significant limitations upon the scope and scale of the Defense Department’s likely influence on technological advance that can contribute to the nation’s energy infrastructure as a whole.”¶ The report, titled, "Energy Innovation at the Department of Defense: Assessing the Opportunities," was produced by the Consortium of Science, Policy and Outcomes at Arizona State University and the nonprofit Clean Air Task Force. The Washington, D.C.-based Bipartisan Policy Center was the primary sponsor of the study.¶ "The Pentagon is unlikely to become an all-purpose hub for advancing clean-energy technologies, because its energy innovation activities will be sustainable only where they can support the nation’s defense capabilities," says the report. "Many technologies that are of great importance to improving the environment, such as carbon-free central station generation, may not easily fit with DoD’s mission."¶ The United States should capitalize on energy-related investments made by the Defense Department, the study says, but cautions that the biggest challenge for advocates of military-led energy innovation is to delineate a path forward for green projects that are linked to a national strategy of reducing dependence on fossil fuels. ¶ A case in point is the Defense Department’s enthusiasm for biofuels. Both the Navy and the Air Force are investing hundreds of millions of dollars to test alternative fuel mixes in several types of ships and aircraft. But in the absence of a national plan to integrate biofuels into the civilian economy, the Pentagon finds itself as the proverbial tail trying to wag the dog. In recent months, Republican lawmakers have disparaged Defense Department biofuel programs as wasteful and disconnected from military needs.¶ The Pentagon’s contributions to energy innovation must reflect U.S. military mission needs, the study says. “Otherwise the incentives will be too weak.” The authors cite the example of the U.S. Air Force’s initial reluctance to embrace pilotless aircraft. “Yet the operational logic of unmanned aircraft has proven too strong to resist. … The lesson for energy-climate innovation is straightforward: mission- critical technologies will get commitment and support; others may not.”¶ There are reasons to question how much, or how easily, the Defense Department’s innovation capacity can or will be applied to the energy challenges that are most relevant to U.S. environmental goals, the study says. “DoD offers important institutional lessons, and models for innovation driven by the defense mission — but lessons and models that may not always translate easily to the energy context. … The department [which accounts for less than 2 percent of U.S. fuel consumption] is unlikely to become an all-purpose engine of energy innovation.”¶ The extent to which Pentagon-funded technologies have the potential to catalyze innovation relevant to large-scale reduction of global greenhouse gas emissions remains to be seen, the study says. “An important open question in this regard is the degree to which DoD will see zero carbon base load energy generation for its fixed installations as an area worthy of investments.”¶ The authors praise the Defense Department’s achievements in advancing energy innovation. These projects should continue, the study says, “but we must also be realistic in our expectations for the ultimate outcome of these efforts, unless greater attempts are made to consciously align DoD’s efforts with larger national goals and resources.”

#### Natural gas will wreck the industry

WSJ 12 (3/15, “Cheap Natural Gas Unplugs U.S. Nuclear-Power Revival”)

What killed the revival wasn't last year's nuclear accident in Japan, nor was it a soft economy that dented demand for electricity. Rather, a shale-gas boom flooded the U.S. market with cheap natural gas, offering utilities a cheaper, less risky alternative to nuclear technology.¶ "It's killed off new coal and now it's killing off new nuclear," says David Crane, chief executive of NRG Energy Inc., NRG +3.58% a power-generation company based in Princeton, N.J. "Gas has come along at just the right time to upset everything."¶ Across the country, utilities are turning to natural gas to generate electricity, with 258 plants expected to be built from 2011 through 2015, federal statistics indicate. Not only are gas-fired plants faster to build than reactors, they are much less expensive. The U.S. Energy Information Administration says it costs about $978 per kilowatt of capacity to build and fuel a big gas-fired power plant, compared with $5,339 per kilowatt for a nuclear plant.¶ Already, the inexpensive natural gas is putting downward pressure on electricity costs for consumers and businesses.¶ The EIA has forecast that the nation will add 222 gigawatts of generating capacity between 2010 and 2035—equivalent to one-fifth of the current U.S. capacity. The biggest chunk of that addition—58%—will be fired by natural gas, it said, followed by renewable sources, including hydropower, at 31%, then coal at 8% and nuclear power at 4%.¶ "What utility doesn't want cheap fuel?" says Steve Piper, associate director of energy fundamentals at SNL Financial, a research company. He predicts natural gas will remain the "default fuel" for as long as gas production remains high and prices stay low.

## Politics

### AT: Labor Shortages KT Nuclear

#### Doesn’t turn energy

Ron Adams 10 The Energy Collective "Nuclear Industry Can Lead a Revival in Skilled Labor and Manufacturing in the United States" Nov 15 http://theenergycollective.com/rodadams/47144/nuclear-industry-can-lead-revival-skilled-labor-and-manufacturing-united-states.

At this point 13 license applications for up to 22 new reactors have been filed with the U.S. Nuclear Regulatory Commission (NRC), and the industry expects four-to-eight new plants to be operating by the end of the decade. Construction activities already have begun at plant sites in Georgia and South Carolina. As a consequence, over the past three years more than 15,000 careers, not just jobs, have been created as the nuclear industry has invested over $4 billion in new nuclear plant development. Plans call for the investment of another $8 billion to be in position to supply the materials needed to begin large-scale construction in 2011-2012. Many of these careers don’t require a college degree, but have earnings potential that equals, and even exceeds, that of college graduates. Teachers can play an instrumental part in creating awareness among their students of these careers.

### 1AR XT – PC Doesn’t Spillover

#### Reject journalists’ issue specific internals

Dickinson 9 (Matthew, professor of political science at Middlebury College and taught previously at Harvard University where he worked under the supervision of presidential scholar Richard Neustadt, 5/26, Presidential Power: A NonPartisan Analysis of Presidential Politics, “Sotomayor, Obama and Presidential Power,” <http://blogs.middlebury.edu/presidentialpower/2009/05/26/sotamayor-obama-and-presidential-power/>)

What is of more interest to me, however, is what her selection reveals about the basis of presidential power. Political scientists, like baseball writers evaluating hitters, have devised numerous means of measuring a president’s influence in Congress. I will devote a separate post to discussing these, but in brief, they often center on the creation of legislative “box scores” designed to measure how many times a president’s preferred piece of legislation, or nominee to the executive branch or the courts, is approved by Congress. That is, how many pieces of legislation that the president supports actually pass Congress? How often do members of Congress vote with the president’s preferences? How often is a president’s policy position supported by roll call outcomes? These measures, however, are a misleading gauge of presidential power – they are a better indicator of congressional power. This is because how members of Congress vote on a nominee or legislative item is rarely influenced by anything a president does. Although journalists (and political scientists) often focus on the legislative “endgame” to gauge presidential influence – will the President swing enough votes to get his preferred legislation enacted? – this mistakes an outcome with actual evidence of presidential influence. Once we control for other factors – a member of Congress’ ideological and partisan leanings, the political leanings of her constituency, whether she’s up for reelection or not – we can usually predict how she will vote without needing to know much of anything about what the president wants. (I am ignoring the importance of a president’s veto power for the moment.) Despite the much publicized and celebrated instances of presidential arm-twisting during the legislative endgame, then, most legislative outcomes don’t depend on presidential lobbying. But this is not to say that presidents lack influence. Instead, the primary means by which presidents influence what Congress does is through their ability to determine the alternatives from which Congress must choose. That is, presidential power is largely an exercise in agenda-setting – not arm-twisting. And we see this in the Sotomayer nomination. Barring a major scandal, she will almost certainly be confirmed to the Supreme Court whether Obama spends the confirmation hearings calling every Senator or instead spends the next few weeks ignoring the Senate debate in order to play Halo III on his Xbox. That is, how senators decide to vote on Sotomayor will have almost nothing to do with Obama’s lobbying from here on in (or lack thereof). His real influence has already occurred, in the decision to present Sotomayor as his nominee.

#### PC theory’s false---not finite

Hirsh 2/7 Michael, chief correspondent for National Journal, previously served as the senior editor and national economics correspondent for Newsweek, has appeared many times as a commentator on Fox News, CNN, MSNBC, and National Public Radio, has written for the Associated Press, The New York Times, The Washington Post, Foreign Affairs, Harper’s, and Washington Monthly, and authored two books, "There's No Such Thing as Political Capital", 2013, [www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207](http://www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207)

The real problem is that the idea of political capital—or mandates, or momentum—is so poorly defined that presidents and pundits often get it wrong. “Presidents usually over-estimate it,” says George Edwards, a presidential scholar at Texas A&M University. “The best kind of political capital—some sense of an electoral mandate to do something—is very rare. It almost never happens. In 1964, maybe. And to some degree in 1980.” For that reason, political capital is a concept that misleads far more than it enlightens. It is distortionary. It conveys the idea that we know more than we really do about the ever-elusive concept of political power, and it discounts the way unforeseen events can suddenly change everything. Instead, it suggests, erroneously, that a political figure has a concrete amount of political capital to invest, just as someone might have real investment capital—that a particular leader can bank his gains, and the size of his account determines what he can do at any given moment in history.¶ Naturally, any president has practical and electoral limits. Does he have a majority in both chambers of Congress and a cohesive coalition behind him? Obama has neither at present. And unless a surge in the economy—at the moment, still stuck—or some other great victory gives him more momentum, it is inevitable that the closer Obama gets to the 2014 election, the less he will be able to get done. Going into the midterms, Republicans will increasingly avoid any concessions that make him (and the Democrats) stronger.

#### Obama knows PC’s fake---1st term lessons

Hirsh 2/7 Michael, chief correspondent for National Journal, previously served as the senior editor and national economics correspondent for Newsweek, has appeared many times as a commentator on Fox News, CNN, MSNBC, and National Public Radio, has written for the Associated Press, The New York Times, The Washington Post, Foreign Affairs, Harper’s, and Washington Monthly, and authored two books, "There's No Such Thing as Political Capital", 2013, [www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207](http://www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207)

Obama himself learned some hard lessons over the past four years about the falsity of the political-capital concept. Despite his decisive victory over John McCain in 2008, he fumbled the selling of his $787 billion stimulus plan by portraying himself naively as a “post-partisan” president who somehow had been given the electoral mandate to be all things to all people. So Obama tried to sell his stimulus as a long-term restructuring plan that would “lay the groundwork for long-term economic growth.” The president thus fed GOP suspicions that he was just another big-government liberal. Had he understood better that the country was digging in against yet more government intervention and had sold the stimulus as what it mainly was—a giant shot of adrenalin to an economy with a stopped heart, a pure emergency measure—he might well have escaped the worst of the backlash. But by laying on ambitious programs, and following up quickly with his health care plan, he only sealed his reputation on the right as a closet socialist.s

### 1AR XT – Winners Win

#### a) Energy breaks gridlock and builds momentum

Izadi 12 Elahe is a writer for the National Journal. “Former Sen. Trent Lott, Ex-Rep. Jim Davis Bemoan Partisanship on Energy Issues,” 8/29, http://www.nationaljournal.com/2012-election/former-members-bemoan-partisanship-on-energy-issues-20120829

In a climate where everything from transportation issues to the farm bill have gotten caught in political gridlock, it will take serious willingness to compromise to get formerly bipartisan energy issues moving from the current partisan standstill.¶ “If we get the right political leadership and the willingness to put everything on the table, I don’t think this has to be a partisan issue,” former Rep. Jim Davis, D-Fla., said during a Republican National Convention event on Wednesday in Tampa hosted by National Journal and the American Petroleum Institute.¶ Former Senate Republican Leader Trent Lott of Mississippi said that “Republicans who want to produce more of everything have to also be willing to give a little on the conservation side.”¶ The event focused on the future of energy issues and how they are playing out in the presidential and congressional races. Four years ago, the major presidential candidates both agreed that climate change needed to be addressed. However, since then, the science behind global warming has come into question by more and more Republicans.¶ But casting energy as a defense or jobs issue, in the current political climate, will allow debates between lawmakers to gain some steam, Lott and Davis agreed.¶ The export of coal and natural gas, hydraulic fracturing, and how tax reform will affect the energy industries are all issues that will have to be dealt with by the next president and Congress.¶ “The job of the next president is critical on energy and many of these issues, and the job is very simple: adult supervision of the Congress,” Davis said.

#### b) First 100 days key

The Hill 3-20, “Obama honeymoon may be over,” The Hill, 3-20-13, http://thehill.com/homenews/administration/289179-obama-honeymoon-may-be-over#ixzz2OkmbVXZl

Obama has yet to complete the first 100 days of his second term. But without a signature achievement since his reelection, he **faces a crossroads** that could define the remainder of his presidency. ¶ White House aides maintain that the 24-hour news cycle makes comparisons to previous presidents difficult.¶ “I think the nature of our politics now is different than Ronald Reagan’s honeymoon,” one senior administration official said. “The ebb and flow of politics doesn’t follow that model anymore.”¶ But observers say a drop in popularity is typical for second-termers.¶ “There may be some typical second-term honeymoon fade happening,” said Martin Sweet, an assistant visiting professor of political science at Northwestern University. “Honeymoon periods for incumbents are a bit more ephemeral.”¶ But like most other presidents, Sweet added, “Obama’s fate is tied to the economy.”¶ “Continuing economic progress would ultimately strengthen the president but if we are hit with a double-dip recession, then Obama’s numbers will crater,” he said.¶ The White House disputes any notion that Obama has lost any political capital in recent weeks.¶ “The president set out an ambitious agenda and he’s doing big things that are not easy, from immigration to gun control,” the senior administration official said. “Those are policies you can’t rack up easily, and no one here is naive about that.”¶ The White House is aware that the clock is ticking to push its hefty agenda, but the official added, “The clock is not ticking because of president’s political capital. The clock is ticking because there’s a timetable in achieving all of this. [Lawmakers] are not going to sign on because the president’s popular.” ¶ And administration officials believe they still have the leverage.¶ “There’s a decent amount of momentum behind all of this,” the official said. “It looks like immigration is closer [to passage] than ever before.”¶ Republican strategist Ken Lundberg argued that current budget fights “have cut short the president’s second-term honeymoon.” ¶ He said this could also hurt the president’s party, warning “the lower the president’s approval rating, the bigger the consequence for vulnerable Democrats.”¶ “Voters want solutions, and if they see the president headed down the wrong path, lockstep lawmakers will be punished in 2014,” he said.¶ Democratic strategist Chris Kofinis maintained that as long as he’s president, Obama still has the leverage.¶ “Immigration reform doesn’t get impacted by whether Obama’s poll numbers are 55 or 45,” Kofinis said. “Does it make certain things a little more difficult? Possibly. But while his numbers may have fallen, he’s still more likeable than the Republicans are on their best day.”¶ Kofinis said the real question for Obama is what kind of emphasis he’s going to place on his second term because the public will have less patience than they did during his first.¶ “The challenge in a second term is the American people look at certain things and have a higher tolerance in a second term,” he said. “When they know you’re not running for reelection again, they hold you to a higher standard.” ¶ Bonjean and other Republicans are aware that Obama could potentially bounce back from his latest slip in the polls and regain his footing.¶ “He has the opportunity to take minor legislative victories and blow them up into major accomplishments – meaning if he got something on gun control, he can tout that that was part of his agenda and the work isn’t over. If he were able to strike a grand bargain with Republicans, that’d be a legacy issue.”

#### c) Prefer qualifications

Green 10 David Michael, professor of political science at Hofstra University, 6/11, "The Do-Nothing 44th President", <http://www.opednews.com/articles/The-Do-Nothing-44th-Presid-by-David-Michael-Gree-100611-648.html>

Moreover, there is a continuously evolving and reciprocal relationship between presidential boldness and achievement. In the same way that nothing breeds success like success, nothing sets the president up for achieving his or her next goal better than succeeding dramatically on the last go around. This is absolutely a matter of perception, and you can see it best in the way that Congress and especially the Washington press corps fawn over bold and intimidating presidents like Reagan and George W. Bush. The political teams surrounding these presidents understood the psychology of power all too well. They knew that by simultaneously creating a steamroller effect and feigning a clubby atmosphere for Congress and the press, they could leave such hapless hangers-on with only one remaining way to pretend to preserve their dignities. By jumping on board the freight train, they could be given the illusion of being next to power, of being part of the winning team. And so, with virtually the sole exception of the now retired Helen Thomas, this is precisely what they did.