# Budget DA

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#### The DOD budget’s focused on Asia pivot---new tradeoffs collapse it

Todd Harrison 12, Center for Strategic and Budgetary Priorities, 8/24/2012, ANALYSIS OF THE FY 2013 DEFENSE BUDGET AND SEQUESTRATION, http://www.csbaonline.org/wp-content/uploads/2012/08/Analysis-of-the-FY-2013-Defese-Budget.pdf

The Fiscal Year (FY) 2013 defense budget currently being debated in Congress is a departure from previous budgets in several respects. It is the first budget submitted following the release of the Pentagon’s new strategic guidance, marking the beginning of a “pivot” from the wars of the past decade to the Asia-Pacific region. It is also the first budget request in more than a decade to propose a real decline in defense spending from the level currently enacted. Moreover, the prospect of sequestration hangs over the budget, threatening to cut some 10 percent of funding if Congress does not act to prevent it. Secretary of Defense Leon Panetta has argued that the budget request is a “complete package,” that “there is little room here for significant modification,” and that any further funding reductions, such as those called for by sequestration, would require the Department to fundamentally rethink its new strategy.1 Nevertheless, the FY 2013 request is unlikely to survive unscathed and the Department will likely be forced to revise its strategic guidance.

#### SMRs are incredibly costly

Arjun Makhijani 10, President of the Institute for Energy & Environmental Research, Ph.D. in engineering (specialization: nuclear fusion) from the University of California at Berkeley; and Michele Boyd, former director of the Safe Energy Program at Physicians for Social Responsibility, September 2010, “Small Modular Reactors,” http://www.psr.org/nuclear-bailout/resources/small-modular-reactors-no.pdf

SMR proponents claim that small size will enable mass manufacture in a factory, enabling considerable savings relative to field construction and assembly that is typical of large reactors. In other words, modular reactors will be cheaper because they will be more like assembly line cars than hand-made Lamborghinis. In the case of reactors, however, several offsetting factors will tend to neutralize this advantage and make the costs per kilowatt of small reactors higher than large reactors. First, in contrast to cars or smart phones or similar widgets, the materials cost per kilowatt of a reactor goes up as the size goes down. This is because the surface area per kilowatt of capacity, which dominates materials cost, goes up as reactor size is decreased. Similarly, the cost per kilowatt of secondary containment, as well as independent systems for control, instrumentation, and emergency management, increases as size decreases. Cost per kilowatt also increases if each reactor has dedicated and independent systems for control, instrumentation, and emergency management. For these reasons, the nuclear industry has been building larger and larger reactors in an effort to try to achieve economies of scale and make nuclear power economically competitive.

Proponents argue that because these nuclear projects would consist of several smaller reactor modules instead of one large reactor, the construction time will be shorter and therefore costs will be reduced. However, this argument fails to take into account the implications of installing many reactor modules in a phased manner at one site, which is the proposed approach at least for the United States. In this case, a large containment structure with a single control room would be built at the beginning of the project that could accommodate all the planned capacity at the site. The result would be that the first few units would be saddled with very high costs, while the later units would be less expensive. The realization of economies of scale would depend on the construction period of the entire project, possibly over an even longer time span than present largereactor projects. If the later-planned units are not built, for instance due to slower growth than anticipated, the earlier units would likely be more expensive than present reactors, just from the diseconomies of the containment, site preparation, instrumentation and control system expenditures. Alternatively, a containment structure and instrumentation and control could be built for each reactor. This would greatly increase unit costs and per kilowatt capital costs. Some designs (such as the PBMR) propose no secondary containment, but this would increase safety risks.

These cost increases are unlikely to be offset even if the entire reactor is manufactured at a central facility and some economies are achieved by mass manufacturing compared to large reactors assembled on site. Furthermore, estimates of low prices must be regarded with skepticism due to the history of past cost escalations for nuclear reactors and the potential for cost increases due to requirements arising in the process of NRC certification. Some SMR designers are proposing that no prototype be built and that the necessary licensing tests be simulated. Whatever the process, it will have to be rigorous to ensure safety, especially given the history of some of proposed designs.

#### Causes tradeoffs that wreck the budget

Jack Spencer 11, Research Fellow in Nuclear Energy in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation, 6/22/11, “Capability, Not Politics, Should Drive DOD Energy Research,” http://www.heritage.org/research/reports/2011/06/capability-not-politics-should-drive-dod-energy-research

With multiple wars ongoing, traditional threats looming, and new ones emerging, the U.S. Armed Forces are already under tremendous stress. So introducing a new assignment that needlessly bleeds scarce resources away from core missions to advance a political agenda is untenable. Yet this is exactly what the Obama Administration is doing by ordering the military to lead a green revolution.

The White House is pushing the idea that the alternative energy industry would get the kick start it needs if the military will just commit to using them. But the assumptions behind this argument are flawed, and the strategy would increase demands on the military budget while harming national security. Congress should put a stop to it right away.

#### Budget tradeoffs undermine the U.S. pivot to Asia---nuclear war

Colby 11 – Elbridge Colby, research analyst at the Center for Naval Analyses, served as policy advisor to the Secretary of Defense’s Representative to the New START talks, expert advisor to the Congressional Strategic Posture Commission, August 10, 2011, “Why the U.S. Needs its Liberal Empire,” The Diplomat, online: http://the-diplomat.com/2011/08/10/why-us-needs-its-liberal-empire/2/?print=yes

But the pendulum shouldn’t be allowed to swing too far toward an incautious retrenchment. For our problem hasn’t been overseas commitments and interventions as such, but the kinds of interventions. The US alliance and partnership structure, what the late William Odom called the United States’ ‘liberal empire’ that includes a substantial military presence and a willingness to use it in the defence of US and allied interests, remains a vital component of US security and global stability and prosperity. This system of voluntary and consensual cooperation under US leadership, particularly in the security realm, constitutes a formidable bloc defending the liberal international order.¶ But, in part due to poor decision-making in Washington, this system is under strain, particularly in East Asia, where the security situation has become tenser even as the region continues to become the centre of the global economy.¶ A nuclear North Korea’s violent behaviour threatens South Korea and Japan, as well as US forces on the peninsula; Pyongyang’s development of a road mobile Intercontinental Ballistic Missile, moreover, brings into sight the day when North Korea could threaten the United States itself with nuclear attack, a prospect that will further imperil stability in the region.¶ More broadly, the rise of China – and especially its rapid and opaque military build-up – combined with its increasing assertiveness in regional disputes is troubling to the United States and its allies and partners across the region. Particularly relevant to the US military presence in the western Pacific is the development of Beijing’s anti-access and area denial capabilities, including the DF-21D anti-ship ballistic missile, more capable anti-ship cruise missiles, attack submarines, attack aircraft, smart mines, torpedoes, and other assets.¶ While Beijing remains a constructive contributor on a range of matters, these capabilities will give China the growing power to deny the United States the ability to operate effectively in the western Pacific, and thus the potential to undermine the US-guaranteed security substructure that has defined littoral East Asia since World War II. Even if China says today it won’t exploit this growing capability, who can tell what tomorrow or the next day will bring?¶ Naturally, US efforts to build up forces in the western Pacific in response to future Chinese force improvements must be coupled with efforts to engage Beijing as a responsible stakeholder; indeed, a strengthened but appropriately restrained military posture will enable rather than detract from such engagement. ¶ In short, the United States must increase its involvement in East Asia rather than decrease it. Simply maintaining the military balance in the western Pacific will, however, involve substantial investments to improve US capabilities. It will also require augmented contributions to the common defence by US allies that have long enjoyed low defence budgets under the US security umbrella. This won’t be cheap, for these requirements can’t be met simply by incremental additions to the existing posture, but will have to include advances in air, naval, space, cyber, and other expensive high-tech capabilities.¶ Yet such efforts are vital, for East Asia represents the economic future, and its strategic developments will determine which country or countries set the international rules that shape that economic future. Conversely, US interventions in the Middle East and, to a lesser degree, in south-eastern Europe have been driven by far more ambitious and aspirational conceptions of the national interest, encompassing the proposition that failing or illiberally governed peripheral states can contribute to an instability that nurtures terrorism and impedes economic growth. Regardless of whether this proposition is true, the effort is rightly seen by the new political tide not to be worth the benefits gained. Moreover, the United States can scale (and has scaled) back nation-building plans in Iraq, Afghanistan, and the Balkans without undermining its vital interests in ensuring the free flow of oil and in preventing terrorism.¶ The lesson to be drawn from recent years is not, then, that the United States should scale back or shun overseas commitments as such, but rather that we must be more discriminating in making and acting upon them. A total US unwillingness to intervene would pull the rug out from under the US-led structure, leaving the international system prey to disorder at the least, and at worst to chaos or dominance by others who could not be counted on to look out for US interests.¶ We need to focus on making the right interventions, not forswearing them completely. In practice, this means a more substantial focus on East Asia and the serious security challenges there, and less emphasis on the Middle East. ¶ This isn’t to say that the United States should be unwilling to intervene in the Middle East. Rather, it is to say that our interventions there should be more tightly connected to concrete objectives such as protecting the free flow of oil from the region, preventing terrorist attacks against the United States and its allies, and forestalling or, if necessary, containing nuclear proliferation as opposed to the more idealistic aspirations to transform the region’s societies. ¶ These more concrete objectives can be better met by the more judicious and economical use of our military power. More broadly, however, it means a shift in US emphasis away from the greater Middle East toward the Asia-Pacific region, which dwarfs the former in economic and military potential and in the dynamism of its societies. The Asia-Pacific region, with its hard-charging economies and growing presence on the global stage, is where the future of the international security and economic system will be set, and it is there that Washington needs to focus its attention, especially in light of rising regional security challenges. ¶ In light of US budgetary pressures, including the hundreds of billions in ‘security’ related money to be cut as part of the debt ceiling deal, it’s doubly important that US security dollars be allocated to the most pressing tasks – shoring up the US position in the most important region of the world, the Asia-Pacific. It will also require restraint in expenditure on those challenges and regions that don’t touch so directly on the future of US security and prosperity. ¶ As Americans debate the proper US global role in the wake of the 2008 financial crisis and Iraq and Afghanistan, they would do well to direct their ire not at overseas commitments and intervention as such, but rather at those not tied to core US interests and the sustainment and adaptation of the ‘liberal empire’ that we have constructed and maintained since World War II.¶ Defenders of our important overseas links and activities should clearly distinguish their cause from the hyperactive and barely restrained approach represented by those who, unsatisfied with seeing the United States tied down in three Middle Eastern countries, seek intervention in yet more, such as Syria. Indeed, those who refuse to scale back US interventions in the Middle East or call for still more are directly contributing to the weakening of US commitments in East Asia, given strategic developments in the region and a sharply constrained budgetary environment in Washington.¶ We can no longer afford, either strategically or financially, to squander our power in unnecessary and ill-advised interventions and nation-building efforts. The ability and will to intervene is too important to be so wasted.

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### Impacts

#### Unchecked Chinese rise causes global nuclear great-power war

Walton 7 – C. Dale Walton, Lecturer in International Relations and Strategic Studies at the University of Reading, 2007, Geopolitics and the Great Powers in the 21st Century, p. 49

Obviously, it is of vital importance to the United States that the PRC does not become the hegemon of Eastern Eurasia. As noted above, however, regardless of what Washington does, China's success in such an endeavor is not as easily attainable as pessimists might assume. The PRC appears to be on track to be a very great power indeed, but geopolitical conditions are not favorable for any Chinese effort to establish sole hegemony; a robust multipolar system should suffice to keep China in check, even with only minimal American intervention in local squabbles. The more worrisome danger is that Beijing will cooperate with a great power partner, establishing a very muscular axis. Such an entity would present a critical danger to the balance of power, thus both necessitating very **active American intervention** in Eastern Eurasia and **creating the** underlying **conditions for a massive**, and probably **nuclear, great power war**. Absent such a "super-threat," however, the demands on American leaders will be far more subtle: creating the conditions for Washington's gentle decline from playing the role of unipolar quasi-hegemon to being "merely" the greatest of the world's powers, while aiding in the creation of a healthy multipolar system that is not marked by close great power alliances.

#### Loss of Asian regional hegemony is the only existential risk---their wars pale in comparison

Layne 7 – Christopher Layne, associate professor of International Affairs at the Bush School of Government and Public Service at Texas A&M University, Fall 2007, “Who Lost Iraq and Why It Matters: The Case for Offshore Balancing,” online: http://www.worldpolicy.org/blog/who-lost-iraq-and-why-it-matters-case-offshore-balancing

The war’s ideological supporters are wrong. The United States is not failing in Iraq because “mistakes were made.” Rather, the decision to go to war was itself mistaken. From its inception, the invasion of Iraq was fated to be mission impossible, not mission accomplished, because the strategy was based on faulty assumptions and its objectives exceeded America’s grasp. The U.S. failure in Iraq should be a strong warning against provoking a military conflict with Iran, and the catalyst for a new regional strategy: offshore balancing.1 The key assumption underlying offshore balancing is that the most vital U.S. interests are preventing the emergence of an dominant power in Europe and East Asia—a “Eurasian hegemon”—and forestalling the emergence of a regional (“oil”) hegemon in the Middle East. Only a Eurasian hegemon could pose an existential threat to the United States. A regional hegemon in the Middle East could imperil the flow of oil upon which the U.S. economy and the economies of the advanced industrial states depend. As an offshore balancer, the U.S. would rely on the dynamics of the balance of power to thwart any states with hegemonic ambitions. An offshore balancing strategy would permit the United States to withdraw its ground forces from Eurasia (including the Middle East) and assume an over-the-horizon military posture. If—and only if—regional power balances crumbled would the United States re-insert its troops into Eurasia.

#### Successful Asia pivot enables future reductions in defense spending---that gets channeled into cyber-defense which solves the grid

Michael Lind 11, Policy Director of the Economic Growth Program at the New America Foundation, February 1, 2011, “Let's end America's "Middle East First" policy,” online: http://www.salon.com/news/politics/war\_room/2011/02/01/lind\_middle\_east\_first

Among other things, an Asia First strategy would allow the U.S. to preserve its security while reducing the Pentagon budget in the interest of long-term solvency. Having renounced further labor-intensive wars of counterinsurgency and nation-building in the Greater Middle East, the U.S. could downsize the Army, in favor of a military based chiefly on elite special forces, naval and air forces and unmanned drones. Some of the savings could be channeled into homeland security defenses -- for example, protecting infrastructure and telecommunications against the mysterious cyber attacks that have been directed at the U.S. and Europe from China. Other savings could be devoted to rebuilding America’s dual military-civilian manufacturing base, which has been ravaged by offshoring and the collaboration of U.S.-based multinationals with Chinese, Japanese and German industrial policies. Any future great-power conflict is likely to take the form of a cold war, in which the ultimate victors will be those whose domestic industrial economies are the strongest and whose banking systems are subordinate to their national interests.

### Link

#### Alternative financing magnifies the link---yes, it means that DOD doesn’t write checks up front for the plan, but CBO budget scoring counts the entire cost of the long-term contract in the first year of the budget---that’s all that matters for budgetary tradeoffs

Leonard Leos et al 7, Lieutenant, United States Navy; Paul Rouleau, Lieutenant, United States Navy; and Mark Wadsworth, Lieutenant, United States Navy, June 2007, “Budget Scoring of Alternative Financing Methods for Defense Requirements,” http://www.dtic.mil/dtic/tr/fulltext/u2/a473232.pdf

This research investigates procurement scoring and the Department of Defense’s (DoD) use of alternative financing methods, such as leases and public-private ventures. One of the major impediments to using alternative forms of procurement financing for acquiring defense capabilities is in the budgetary treatment, or “scoring,” of these initiatives by the Congressional Budget Office (CBO), the Office of Management and Budget (OMB) and the congressional Budget Committees. The current scoring policy that has been applied to many initiatives essentially negates the financial advantage for using alternative forms of financing. Therefore, this research examines existing policies and their adherence to statutes and the role of the various government organizations and committees in actual recording of obligations and outlays related to financing alternatives used by federal agencies. Preliminary evidence suggests that this emerging area has major importance for future DoD acquisitions in a resource-constrained environment. Included are recommendations for changes in budgetary scoring that encompass the full scope of federal obligations and expenditures while promoting efficient, more rapid and fiscally responsible acquisitions.

#### CBO scoring completely negates the ability of alternative financing to avoid tradeoffs

Leonard Leos et al 7, Lieutenant, United States Navy; Paul Rouleau, Lieutenant, United States Navy; and Mark Wadsworth, Lieutenant, United States Navy, June 2007, “Budget Scoring of Alternative Financing Methods for Defense Requirements,” http://www.dtic.mil/dtic/tr/fulltext/u2/a473232.pdf

Due to the increasing fiscal pressure caused by the Global War on Terror (GWOT) and the growing burden of entitlement programs, the Department of Defense (DoD) must consider alternative forms of financing, including leases and public-private partnerships (PPPs), to fund necessary programs. This research examines the budgetary treatment, or scoring, of these financial arrangements by the Office of Management and Budget (OMB), the Congressional Budget Office (CBO) and the House and Senate Budget Committees. Every congressional legislation must be scored in accordance with the federal budget process. Scoring legislation is the process of tracking budget authority, projecting future federal outlays based on the budget authority, and recording the actual obligations and outlays in budget execution. The scoring process can greatly affect a bill’s ability to be passed based on the financial considerations made by the CBO, OMB or Congressional Budget Committees.

This research introduces the current applications of leasing and PPPs in the public and private sectors. Additionally, an in-depth analysis of the current scoring process conducted by the CBO, OMB and the Budget Committees will be discussed. These government bodies represent the executive and legislative authorities for financing. This analysis will be applied to three case studies, the budgetary treatment of Energy Savings Performance Contracts (ESPC), and two cases involving the use of PPPs in the Operation and Maintenance of Military Family Housing.

Current scoring and general federal budget policies negate the advantages of using alternative forms of financing such as leasing and PPPs. Therefore, they are not used in the acquisition of major defense assets, even though they have proven to generate substantial benefits for the private sector by providing greater flexibility in financing, encouraging innovation, reducing risks, and saving time and money on projects. This research identifies the scoring policies of both the OMB and CBO and recommends a revised scoring policy that applies financial responsibility as well as fair treatment of the advantages of these initiatives. The end goal is not to develop a solution that will revamp the current budget process, but to provide a policy that will to secure funding for needed defense programs while satisfying the requirements of fiscal accountability.

#### CBO and OMB will score the plan according to the “full funding” policy---that means the entire monetary commitment over the life of the contract has to be recognized in the budget up-front---the point is to force Congress to recognize the total cost at the beginning---which means their spin that DOD doesn’t sign checks immediately is irrelevant

Leonard Leos et al 7, Lieutenant, United States Navy; Paul Rouleau, Lieutenant, United States Navy; and Mark Wadsworth, Lieutenant, United States Navy, June 2007, “Budget Scoring of Alternative Financing Methods for Defense Requirements,” http://www.dtic.mil/dtic/tr/fulltext/u2/a473232.pdf

The term “scoring” describes the process in which the CBO and OMB estimate the budget authority required by proposed legislation. Budget authority is the authority provided by law to incur financial obligations that will result in monetary outlays (OMB, 2006, June). Scorekeeping determines in a dollar amount the budget effects of legislation and forecasts future outlays needed to fund a program. The “scorekeepers” consist of the Congressional Budget Committees, the CBO, and the OMB. The scoring process and principles used by these entities greatly impact the scored “cost” of a program and, consequently, the ability of the legislation to be passed by Congress. The current scoring guidelines greatly limit the advantages of alternative financing arrangements that attempt to draw on private-sector expertise and funding. This section analyzes the scoring rules that apply to lease, lease-purchase, and capital acquisition arrangements and addresses the disadvantages of the current guidelines. It also provides a background into Energy Savings Performance Contracting (ESPC).

The scoring guidelines contained in OMB Circular A-11 embody two fundamental principles of federal budgeting:

1) Federal commitments should be recognized up-front in the budget; at the time those commitments are made.

2) Budget should be comprehensive, capturing all financial activities of the federal budget (President’s Commission on Budget Concepts, 1967, October).

These principles form a policy known as full-funding that requires agencies to request all funding for a project up-front. Prior to 1991, the budget authority and outlays for most leases were recognized annually over the lease term in the form of annual lease payments. This policy allowed agencies to acquire an asset without Congress’ consent for the full funding of the asset.

In 1991, new guidelines issued by the OMB scored capital leases and leasepurchases as up-front and requiring full funding. The policy is designed to force decision-makers to determine the entire cost of a project prior to approving the legislation. The up-front funding allows for greater Congressional control over appropriations and also allows Congress to evaluate multiple pieces of legislation on a cost basis. This “transparency” provides Congress with a “standard” with which to monitor the spending of both individual agencies and the entire federal government on an annual basis.

Full funding also better aligns Congressional budget estimates with the AntiDeficiency Act (31 USC 1341), which prohibits the government from entering into obligations for the payment of money before an appropriation is made, unless authorized by law. Full funding is a policy rather than a law, which means that the interpretation of the policy can impact the budgetary treatment of a program. Whether an asset is acquired via direct purchase, lease, or through a combination of the two, scoring rules are currently biased towards full funding. These financial arrangements, as well an analysis of the impact of the current scoring rules, will be addressed below.

### AT: Alt Cause

#### DOD designed its current budget strategy to shield the Asia pivot from planned cuts

Mark E. Manyin et al 12, Specialist in Asian Affairs at the CRS, 3/28/12, “Pivot to the Pacific? The Obama

Administration’s “Rebalancing” Toward Asia,” http://www.fas.org/sgp/crs/natsec/R42448.pdf

A second new dynamic is the way the various new and old military, diplomatic, and economic initiatives have been presented as parts of one package. The implication is that going forward, the United States will aim to have a much more integrated approach to the region, in which the various tools of power and influence are utilized in a more deliberate and coherent fashion. As of mid-March 2012, there were few outward signs of greater internal policy coordination, though this could be attributable to the absence of any major region-wide meetings or issues. In the Administration’s FY2013 budget proposal, the White House, Defense Department, and State Department do appear to have worked to spare the Asia-Pacific from most of the deeper programmatic cuts that were experienced by other regions.

### Econ Impact

#### Effective Asia pivot key to the global economy

Richard N. Haass 11, former director of policy planning in the US State Department, is President of the Council on Foreign Relations, November 14, 2011, “Re-Orienting America,” online: http://www.cfr.org/us-strategy-and-politics/re-orienting-america/p26490

Something akin to this mistake has befallen American foreign policy. The United States has become preoccupied with the Middle East – in certain ways, the wrong Orient – and has not paid adequate attention to East Asia and the Pacific, where much of the twenty-first century's history will be written.

The good news is that this focus is shifting. Indeed, a quiet transformation is taking place in American foreign policy, one that is as significant as it is overdue. The US has rediscovered Asia.

"Rediscovered" is the operative word here. Asia was one of the two principal theaters of World War II, and again shared centrality with Europe during the Cold War. Indeed, the period's two greatest conflicts – the wars in Korea and Vietnam – were fought on the Asian mainland.

But, with the end of the Cold War and the demise of the Soviet Union, Asia receded from American interest. In the first decade of the post-Cold War era, the US trained much of its attention on Europe. American policymakers focused primarily on enlarging NATO to encompass many of the former Warsaw Pact countries, and on contending with the post-Yugoslav wars.

The second phase of the post-Cold War era began with the 9/11 terror attacks. What followed was a decade of US focus on terrorism and the large-scale commitment of American military forces to Iraq and Afghanistan. The two conflicts have claimed more than 6,000 American lives, cost more than $1 trillion, and consumed countless hours for two presidents and their senior staff.

But now this phase of American foreign policy is ending. President Barack Obama has announced that US armed forces will be out of Iraq by the end of 2011. In Afghanistan, US force levels have peaked and are declining; the only questions concern the pace of withdrawal and the size and role of any residual US military presence after 2014.

This is not to argue that the Middle East is irrelevant or that the US should ignore it. On the contrary, it is still home to massive oil and gas reserves. It is a part of the world where terrorists are active and conflicts have been common. Iran is moving ever closer to developing nuclear weapons; if it does, others may well follow suit. And it is a region now experiencing what could prove to be historic domestic political upheavals. There is also the unique American tie to Israel.

Nevertheless, there are grounds for the US doing less in the greater Middle East than it has in recent years: the weakening of al-Qaeda; the poor prospects for peacemaking efforts; and, above all, the mounting evidence that, by any measure, massive nation-building initiatives are not yielding returns commensurate with the investments.

At the same time, there are strong arguments for greater US involvement in the Asia-Pacific region. With its large populations and fast-growing economies, it is difficult to exaggerate the region's economic importance. American companies export more than $300 billion in goods and services to countries in the region each year. Meanwhile, Asian countries are a critical source of investment for the US economy.

Maintaining regional stability is thus critical for US (and global) economic success. The US has multiple alliance obligations – with Japan, South Korea, Australia, the Philippines, and Thailand – which are needed, in part, to deter North Korean aggression. Moreover, US policy must create an environment in which a rising China is never tempted to use its growing power coercively – within or outside the region. For this reason, recent US efforts to strengthen ties with India and several Southeast Asian countries make good sense.

The US is right to shift its focus from the Middle East to the Far East. The good news is that this conclusion seems to be shared across the US political spectrum. Mitt Romney, the likely Republican nominee for president, pledges to increase the rate of shipbuilding – a commitment linked to an increased US presence in the Pacific. And US Secretary of State Hillary Clinton speaks of America pivoting away from the greater Middle East: "The world's strategic and economic center of gravity is shifting east, and we are focusing more on the Asia-Pacific region."

Regardless of whether the twenty-first century will be another "American century," it is certain that it will be an Asian and Pacific century. It is both natural and sensible that the US be central to whatever evolves from that fact.

#### Yes economy impact – Merlini is better than their impact D – it shuts down global institutions and causes miscalc

**We have strong statistical support---their defense doesn’t account for global crises**

**Royal 10** Jedediah, Director of Cooperative Threat Reduction at the U.S. Department of Defense, “Economic Integration, Economic Signaling and the Problem of Economic Crises,” in Economics of War and Peace: Economic, Legal and Political Perspectives, ed. Goldsmith and Brauer, p. 213-215

Less intuitive is how **periods of economic decline** may **increase the likelihood of external conflict**. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson's (1996) work on leadership cycle theory, finding that rhythms in the global economy are associated with the rise and fall of a pre-eminent power and the often bloody transition from one pre-eminent leader to the next. As such, exogenous shocks such as economic crises could usher in a redistribution of relative power (see also Gilpin, 1981) that leads to **uncertainty about power balances, increasing the risk of miscalculation** (Fearon, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner, 1999). Separately, Pollins (1996) **also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers**, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland's (1996, 2000) theory of trade expectations suggests that ‘future expectation of trade’ is a significant variable in understanding economic conditions and security behaviour of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However**, if the expectations of future trade decline, particularly for difficult to replace items such as energy resources, the likelihood for conflict increases**, as states will be inclined to use force to gain access to those resources. Crises could potentially be the trigger for decreased trade expectations either on its own or because it triggers protectionist moves by interdependent states.4 Third, **others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict**, particularly during periods of economic downturn. They write, **The linkages between internal and external conflict and prosperity are strong and mutually reinforcing.** Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other. (Blomberg & Hess, 2002, p. 89)Economic decline has also been linked with an increase in the likelihood of terrorism (Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government. ‘Diversionary theory’ suggests that, when facing unpopularity arising from economic decline, sitting governments have increased incentives to fabricate external military conflicts to create a ‘rally around the flag’ effect. Wang (1996), DeRouen (1995), and Blomberg, Hess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that periods of weak economic performance in the United States, and thus weak Presidential popularity, are statistically linked to an increase in the use of force. In summary, **recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas political science scholarship links economic decline with external conflict at systemic, dyadic and national levels**.5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic-security debate and deserves more attention. This observation is not contradictory to other perspectives that link economic interdependence with a decrease in the likelihood of external conflict, such as those mentioned in the first paragraph of this chapter. Those studies tend to focus on dyadic interdependence instead of global interdependence and do not specifically consider the occurrence of and conditions created by economic crises. As such, the view presented here should be considered ancillary to those views.

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#### TEXT: The Strategic Environmental R&D Program and the Environmental Security Technology Certification Program of the United States should support research and development for small modular reactors.

#### Competes and solves the case---SERDP’s a uniquely effective mechanism for R&D, spills over to DOD adoption, and avoids cost overruns

John Alic 12, directed studies on international competitiveness and technology policy at the Congressional Office of Technology Assessment, adjunct at the Johns Hopkins School of Advanced International Studies, March 2012, “Defense Department Energy Innovation: Three Cases,” in Energy Innovation at the Department of Defense: Assessing the Opportunities, http://bipartisanpolicy.org/sites/default/files/Energy%20Innovation%20at%20DoD.pdf

The impediments that new facilities energy technologies face today are very similar to those that confronted new environmental technologies in the mid-to-late 1990s— namely, a highly distributed and risk-averse market in which technologies were judged primarily on their perceived costs, often in the absence of reliable data on actual costs. To overcome those challenges, DoD created two programs: the Strategic Environmental R&D Program (SERDP), which supports the development of technology to meet DoD’s highpriority environmental requirements; and the Environmental Security Technology Certification Program, which supports the demonstration and validation of environmental technologies— including, but not limited to, technologies developed with SERDP funding.

SERDP and ESTCP have amassed a very successful track record in the last fifteen years of advancing environmental science and engineering, and also transitioning technologies across DoD. For example, they have transformed how DoD remediates its contaminated groundwater sites. Technologies developed and demonstrated by SERDP and ESTCP are now used across DoD, and have become the standard of practice across the country for Superfund sites. As discussed below, DoD’s efforts to foster innovation in facilities energy are limited to demonstration and validation because (in contrast to the environmental area) there is ample support for science and engineering in industry and the DOE. In other words, DoD’s facilities energy effort replicates ESTCP but not SERDP. However, because the two programs are so closely intertwined, it is useful to look at them together.

Environmental technologies developed and demonstrated by SERDP and ESTCP are deployed on almost every DoD weapons system platform, are used in almost every DoD cleanup, and are part of the management of most installations across the services. These innovative technologies do not lead to new acquisition systems (although they are contained in many), nor are they adopted by initiating a new procurement program. They are typically transitioned through the commercial sector and bought back as services for environmental management; or they become part of new standards, specifications, or installation management procedures; or they are included through upgrades to existing systems during depot-level maintenance. As with energy, environmental issues are ubiquitous; it is assumed they can be managed (or worked around) rather than addressed through technological innovation; and decisions to deploy technologies are driven heavily by cost considerations and regulations. Yet improvements in environmental performance have significantly reduced DoD’s costs and improved its mission performance, while allowing DoD to meet its environmental goals. Similar results are expected if DoD improves its energy performance.

SERDP’s and ESTCP’s effectiveness derives partly from structural factors (i.e., how the programs are organized), and partly from their approach to the problems and the linking of research and development investments to real world demonstrations. Officially, SERDP and ESTCP programs are structured as shown in figure 3.6.

This flow chart shows the classic one-way linear progression from basic research to implementation. Its roots date back to Vannevar Bush’s classic paper, Science, The Endless Frontier, which influenced the structure and funding process for many federal R&D programs. Many have noted that this model neither fits the way research and development actually occurs, nor necessarily supports a robust innovation system. 84 Although the above is the official structure for the program, it does not reflect how innovation is supported and fostered within SERDP and ESTCP. Structurally, SERDP and ESCTP have some unique elements, some of which were planned and some of which came about through circumstance rather than design. Having two programs—SERDP for the science and technology phase, and ESTCP for demonstration—under the same leadership has been important. The two programs are integrated in their goals and objectives but independent in their funding processes. Each program conducts independent reviews of proposals, but the reviews of active projects are conducted jointly, and findings are reported to a single director.

SERDP also has a unique authority in funding research and development. Although it is classified by DoD as a 6.3 program (which is typically associated with advanced development), it has statutory authority to address the full spectrum of science and technology development, from basic through applied and advanced development. This flexibility allows SERDP to avoid the artificial distinction between “basic” and “applied” research and development; SERDP does not subdivide the two activities. For the issues that SERDP and ESTCP address, fundamental science can and should be applied science. Even in the early stages of research, it is advantageous to be mindful of the likely “in-the-field” applications of the work and the technical and economic requirements, and structure a “basic” research project to address those “applied” concerns from the beginning. SERDP funds basic science, but in a way that ensures that key questions that relate to real DoD needs are addressed.

SERDP and ESTCP segregate funding decisions for each stage (science and technology vs. demonstration). This helps prevent the natural tendency to consider sunk costs in a project when evaluating its suitability for demonstration funding. The desire to make good on sunk costs has driven many poor investment decisions in the government; this structure serves as a check on that tendency. When ESTCP considers funding a demonstration project, no consideration is given to where its prior development took place. (In fact, as discussed below, for installation energy technologies, there is no plan for a SERDP investment, given the large development efforts funded by DOE and the private sector.) Finally, formally requiring a demonstration phase also forces rigorous assessment of the state of the technology, and brings into focus operational, technical, and regulatory issues that can be explored realistically only in the field; these are critical steps for environmental and energy technologies.

A more realistic flow diagram for SERDP and ESTCP investments is shown in figure 3.7. Science and technology investments are tightly linked between fundamental research and advanced development. Information is fed back from demonstrations, both to contribute to innovations and to support advances in fundamental science and engineering.

The way SERDP and ESTCP are organized also fosters cross-pollination of perspectives and expertise, and works to create communities across DoD. When research proposals are evaluated, DoD not only considers their scientific merit (as determined by peer review); it also evaluates them with representatives from the services who have direct field experience. Having engineers and managers with this experience sit on research committees to review proposals is invaluable. It also creates a community within DoD, across different branches, for the issues being addressed, which helps support technology transfer. Technology transfer is not viewed as an activity to be done after a technology demonstration; it is integral to the research and demonstration process.

ESTCP demonstrations are conducted to answer the technical, economic, and operational issues of all the communities that have a role in future implementations. For a new weapons system, testing and evaluation is a standard and straightforward part of the acquisition process. In the environmental (and installation energy) area, implementation is highly distributed, technologies are procured through multiple mechanisms and pathways, and there is often no single acquisitions authority; demonstrations of these technologies are more complex**,** and are rarely done with this level of rigor outside of ESTCP. Its role is not to serve as a centralized mandatory gatekeeper that all innovative technologies must get past, but rather to be the instrument to accelerate innovation despite the barriers discussed above. Technologies are tested and evaluated to assess their current performance and costs, to meet the needs of all stakeholders involved in future implementations, and to feed information back to the R&D community either to facilitate more rapid development of the next iteration of a given technology or to stimulate future fundamental research.

The lessons learned by ESTCP in successfully fostering and transitioning innovative environmental technologies are being applied now to installation energy technologies. One key function of the program is that it centralizes the risk of innovative technologies so as to foster innovation across the DoD enterprise. It also works to leverage the existing engineering and support organizations of the services in the selection and execution of the demonstrations. Technology transfer is best done not by creating new organizational structures devoted to that mission, but rather by informing and relying upon the existing management structures of the services. This requires attention to development of the soft tools (guidance documents, training material, draft procurement documents, etc.) of DoD’s management system that are essential to widespread deployment of technologies. It is also important to maintain transparency and openness throughout the testing process, including where demonstration results are concerned. In an arena in which decisions will be made by the thousands, DoD’s traditional approach of limiting access to information will hinder the successful widespread adoption of new technologies.

## 2NC

### Solvency

#### DOD wants SMRs but they want outstanding issues resolved before procurement---means only the CP solves because doing R&D before DOD adopts the tech is key

Dr. Dorothy Robyn 12, Deputy Under Secretary of Defense for Installations and Environment, 3/29/12, “WHAT IS THE PRICE OF ENERGY SECURITY: FROM BATTLEFIELDS TO BASES,” Documents Submitted for the Record, Hearing before the House Armed Services Committee, Subcommittee on Readiness, http://www.gpo.gov/fdsys/pkg/CHRG-112hhrg73800/pdf/CHRG-112hhrg73800.pdf

Mr. BARTLETT. 86) The Congress last year authorized a new DOE program for Small Modular Reactors (SMRs) which included $67M for FY2012 ($452M over 5 years) for design and licensing of two LWR designs of SMRs. After consulting with the Services, please provide details about current or proposed plans at DOD to consider development and deployment of Small Modular Reactor (SMR) at military installations. What actions has DOD undertaken to date independently or in conjunction with the Department of Energy (DOE), Nuclear Regulatory Commission or the National Nuclear Labs to consider development and deployment of SMRs at military installations? What is the budget and please identify the personnel assigned to this effort going forward? Has DOD approved consideration of SMRs for 30-year power purchase agreements at military installations? If not, what are the obstacles to using this authority for SMRs?

Dr. ROBYN. The Department of Defense (DOD) continues to collaborate with the Department of Energy (DoE) and its associated National Labs as they investigate the potential of small modulator reactors (SMRs). Initial meetings with DoE identified a wide variation (relative to normal base demand) in power output among the four technologies under consideration. DoE expects to select two primary technologies by the end of 2012. Further meetings with DoE are planned once the technologies are identified. At that time, DOD needs can be better matched with SMR capabilities. Since DoE does not expect the first SMR plant to be in commercial operation until 2022, further exploration of possible siting locations is premature at this time.

The DOD’s authority to enter into up to 30-year agreements for energy production facilities on lands under its jurisdiction, 10 U.S.C. 2922a, would apply to an SMR the same as to any other energy production facility. Although there are clearly issues that would have to be dealt with because of the special considerations surrounding SMRs, section 2922a is available to use for contracting for provision of such a facility.

#### DOD wants to adopt energy innovations driven by SERDP

John Alic 12, directed studies on international competitiveness and technology policy at the Congressional Office of Technology Assessment, adjunct at the Johns Hopkins School of Advanced International Studies, March 2012, “Defense Department Energy Innovation: Three Cases,” in Energy Innovation at the Department of Defense: Assessing the Opportunities, http://bipartisanpolicy.org/sites/default/files/Energy%20Innovation%20at%20DoD.pdf

DoD has been an enormous engine of innovation in America, driving the development of both defense technologies and, ultimately, very large sectors of commercial activity. In addition to its traditional focus on conventional military hardware, there is now great interest in applying those capabilities to energy innovation, an area of activity that can have enormous benefits both to the United States military and to the country as a whole. In thinking about this question, it is worth considering the two different (but complementary) models of innovation at DoD: the well-known Defense Advanced Research Projects Agency (DARPA) model, which has produced extraordinary technological breakthroughs (at great cost) that have allowed America to dominate the battlefield; and the more recent SERDP and ESTCP model, which focuses less on cost-insensitive breakthroughs and more on developing and demonstrating cost-effective technologies that can enhance the effectiveness of the overall fighting force. The SERDP and ESTCP’s test bed cost-consciousness and ability to work across the spectrum from basic to applied research and demonstration makes it uniquely effective at assisting innovative technologies across the Valley of Death and into commercial viability. While the extraordinary “leap-ahead” innovations of DARPA more easily capture the imagination, the ability of the ESTCP’s test bed program to improve the overall energy efficiency of the United States military—and the civilian economy—should not be overlooked. ESTCP offers both the military and the nation an effective approach that can leverage the large investments in energy technology developments at DOE and the private sector, and result in a real energy revolution.

#### Solves tech transfer within the DOD post-development

**Marqusee 2012** – Executive Director of the Strategic Environmental Research and Development Program and the Environmental Security Technology Certification Program at the DOD (March, Jeffrey, Energy Innovation at the Department of Defense: Assessing the Opportunities, White Paper, “Military installations and energy technology innovation”, http://bipartisanpolicy.org/sites/default/files/Energy%20Innovation%20at%20DoD.pdf, WEA) \*note a typo, this dude’s last name is actually spelled Marqusee…

A more realistic flow diagram for SERDP and ESTCP¶ investments is shown in figure 3.7. Science and technology¶ investments are tightly linked between fundamental research¶ and advanced development. Information is fed back from¶ demonstrations, both to contribute to innovations and to¶ support advances in fundamental science and engineering.¶ The way SERDP and ESTCP are organized also fosters¶ cross-pollination of perspectives and expertise, and works to¶ create communities across DoD. When research proposals¶ are evaluated, DoD not only considers their scientific merit¶ (as determined by peer review); it also evaluates them¶ with representatives from the services who have direct¶ field experience. Having engineers and managers with this¶ experience sit on research committees to review proposals¶ is invaluable. It also creates a community within DoD, across¶ different branches, for the issues being addressed, which helps¶ support technology transfer. Technology transfer is not viewed¶ as an activity to be done after a technology demonstration; it is¶ integral to the research and demonstration process.

ESTCP demonstrations are conducted to answer the technical,¶ economic, and operational issues of all the communities that¶ have a role in future implementations. For a new weapons¶ system, testing and evaluation is a standard and straightforward¶ part of the acquisition process. In the environmental (and¶ installation energy) area, implementation is highly distributed,¶ technologies are procured through multiple mechanisms and¶ pathways, and there is often no single acquisitions authority;¶ demonstrations of these technologies are more complex, and¶ are rarely done with this level of rigor outside of ESTCP. Its role¶ is not to serve as a centralized mandatory gatekeeper that¶ all innovative technologies must get past, but rather to be¶ the instrument to accelerate innovation despite the barriers¶ discussed above. Technologies are tested and evaluated to assess¶ their current performance and costs, to meet the needs of all¶ stakeholders involved in future implementations, and to feed¶ information back to the R&D community either to facilitate more¶ rapid development of the next iteration of a given technology or¶ to stimulate future fundamental research.

The lessons learned by ESTCP in successfully fostering and¶ transitioning innovative environmental technologies are being¶ applied now to installation energy technologies. One key¶ function of the program is that it centralizes the risk of innovative¶ technologies so as to foster innovation across the DoD enterprise.¶ It also works to leverage the existing engineering and support¶ organizations of the services in the selection and execution of the¶ demonstrations. Technology transfer is best done not by creating¶ new organizational structures devoted to that mission, but¶ rather by informing and relying upon the existing management¶ structures of the services. This requires attention to development¶ of the soft tools (guidance documents, training material, draft¶ procurement documents, etc.) of DoD’s management system¶ that are essential to widespread deployment of technologies.¶ It is also important to maintain transparency and openness¶ throughout the testing process, including where demonstration¶ results are concerned. In an arena in which decisions will be¶ made by the thousands, DoD’s traditional approach of limiting¶ access to information will hinder the successful widespread¶ adoption of new technologies.

### NB

#### Avoids the budget DA---only a shift towards the CP’s mechanism puts cost at the center of DOD’s energy innovation strategy

John Alic 12, directed studies on international competitiveness and technology policy at the Congressional Office of Technology Assessment, adjunct at the Johns Hopkins School of Advanced International Studies, March 2012, “Defense Department Energy Innovation: Three Cases,” in Energy Innovation at the Department of Defense: Assessing the Opportunities, http://bipartisanpolicy.org/sites/default/files/Energy%20Innovation%20at%20DoD.pdf

Broadly speaking, DoD’s traditional innovation model is to make large investments to develop a new capability or weapons system that allows the U.S. military to dominate on the battlefield. In that context, costs are not a chief concern, given the dramatic benefits of the new technology; cost savings are more a part of production and procurement rather than the innovation process itself.

By contrast, with energy (and environmental) innovation, cost considerations must be integral from the beginning. Stated differently, DoD is highly sensitive to both performance and cost when it comes to energy technology. DoD’s mission is national defense, not energy efficiency or environmental protection; as a general matter, DoD does not do something differently just because it’s green—the technologies have to be cheaper and better than the technologies and methods that DoD is currently using.

Energy innovations must also integrate into existing infrastructure or processes. Innovation is therefore necessarily a mix of evolutionary improvements with less frequent radical innovations. Radical changes do occur, but DoD must be cognizant of how they can be transitioned given regulations and standards as well as large investments in legacy systems and processes.

#### The plan puts too much too soon—we should let R&D refine SMRs. Guaranteeing purchases in the interim jeopardize development and links to politics and tradeoff

O’Keefe 12William O'Keefe, George C. Marshall Institute CEO, 5/22/12, DOD’s ‘Clean Energy’ Is a Trojan Horse , energy.nationaljournal.com/2012/05/powering-our-military-whats-th.php

There are three reasons for the Department of Defense (DOD) to be interested in biofuels—to reduce costs, improve efficiency, and reduce vulnerability. These are legitimate goals and should be pursued through a well thought out and rational Research-and-Development (R&D) program. But it’s not appropriate to use military needs to push a clean energy agenda that has failed in the civilian sector. Packaging the issue as a national security rationale is a Trojan Horse that hides another attempt to promote a specific energy industrial policy. Over the past four decades such initiatives have demonstrated a record of failure and waste.

As part of the military’s push for green initiatives, both the Navy and Air Force have set goals to obtain up to 50 percent of their fuel needs from alternative sources. The underlying rationale is to reduce US dependence on foreign oil. But the Rand Corporation, the preeminent military think tank in the nation, recently conducted a study, Alternative Fuels for Military Applications; it concludes, "The use of alternative fuels offers the armed services no direct military benefit." It also concludes that biofuels made from plant waste or animal fats could supply no more than 25,000 barrels daily. That’s a drop in the bucket considering the military is the nation’s largest fuel consumer.

Additionally, there is no evidence that commercial technology will likely to be available in the near future to produce large quantities of biofuels at lower costs than conventional fuels. The flipside of that argument is that the cost of conventional fuels is uncertain because of dependence on imports from unstable sources. While that is true, it misses the point. For example, our reliance on imports from the Persian Gulf is declining and could be less if we expanded our own domestic production. **Until alternatives that are cost competitive can be developed**, DOD should look at alternative ways to reduce price volatility, just as large commercial users do.

The second reason for pursuing alternative fuels is related to the first. Greater efficiency reduces costs by reducing the amount of fuel used. The military has been pursuing this goal for some time, as has the private sector. DOD total energy consumption declined by more than 60% between 1985 and 2006, according to Science 2.0. Improvements will continue because of continued investments in new technologies, especially in the private sector, which has market-driven incentives to reduce the cost of fuel consumption.

Finally, there is the argument that somehow replacing conventional fuels with bio-fuels will reduce supply chain vulnerability and save lives. Rand also addressed this issue from both the perspective on naval and ground based forces. It concluded that there is no evidence that a floating bio-fuels plant “would be less expensive than using either Navy oilers or commercial tankers to deliver finished fuel products.” It also dismissed the concept of small scale production units that would be co-located with tactical units. It concluded, “any concepts that require delivery of a carbon containing feedstock appear to place a logistical and operational burden on forward-based tactical units that would be well beyond that associated with the delivery of finished fuels.”

Future military needs are met by a robust R&D program carried out by the services and the Defense Advanced Research Projects Agency (DARPA). Letting that agency and the services invest in future technologies to meet their specific service needs and maintain our military strength without political meddling is in the nation’s best interest. Advances in military technology that has civilian applications eventually enters the market place. Take for example the DARPA’s research into improved military communication that eventually developed into internet technology that revolutionized how we communicate and obtain and use information. If DOD pursues research focused on lower costs, greater efficiency, and more secure fuel supplies, the civilian economy will eventually benefit.

At a time when the military if faced with substantial budget cuts, allocating scarce resources to pursue so called “clean energy” objectives is worse than wasteful. It borders on a dereliction of duty.

# Warming Adv

## 1NC

### Warming Advantage---SMRs Don’t Solve

#### SMRs don’t solve warming---they take too long and trade off with renewable tech that’s closer to viability

Arjun Makhijani 10, President of the Institute for Energy & Environmental Research, Ph.D. in engineering (specialization: nuclear fusion) from the University of California at Berkeley; and Michele Boyd, former director of the Safe Energy Program at Physicians for Social Responsibility, September 2010, “Small Modular Reactors,” http://www.psr.org/nuclear-bailout/resources/small-modular-reactors-no.pdf

Efficiency and most renewable technologies are already cheaper than new large reactors. The long time—a decade or more—that it will take to certify SMRs will do little or nothing to help with the global warming problem and will actually complicate current efforts underway. For example, the current schedule for commercializing the above-ground sodium cooled reactor in Japan extends to 2050, making it irrelevant to addressing the climate problem. Relying on assurances that SMRs will be cheap is contrary to the experience about economies of scale and is likely to waste time and money, while creating new safety and proliferation risks, as well as new waste disposal problems.

### Warming Impact D

#### No impact---mitigation and adaptation will solve

Robert O. Mendelsohn 9, the Edwin Weyerhaeuser Davis Professor, Yale School of Forestry and Environmental Studies, Yale University, June 2009, “Climate Change and Economic Growth,” online: http://www.growthcommission.org/storage/cgdev/documents/gcwp060web.pdf

These statements are largely alarmist and misleading. Although climate change is a serious problem that deserves attention, society’s immediate behavior has an extremely low probability of leading to catastrophic consequences. The science and economics of climate change is quite clear that emissions over the next few decades will lead to only mild consequences. The severe impacts predicted by alarmists require a century (or two in the case of Stern 2006) of no mitigation. Many of the predicted impacts assume there will be no or little adaptation. The net economic impacts from climate change over the next 50 years will be small regardless. Most of the more severe impacts will take more than a century or even a millennium to unfold and many of these “potential” impacts will never occur because people will adapt. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long‐range climate risks. What is needed are long‐run balanced responses.

## 2NC

#### SMRs don’t solve warming---costs won’t enable large-scale adoption and they trade off with other efforts

IEER 10 – Institute for Energy & Environmental Research, 9/29/10, “'Small Modular Reactors' No Panacea for What Ails Nuclear Power,” http://www.prnewswire.com/news-releases/ieerpsr-small-modular-reactors-no-panacea-for-what-ails-nuclear-power-104024223.html

And what about SMRs as some kind of "silver bullet" for averting global warming?

The IEER/PSR fact sheet points out: "Efficiency and most renewable technologies are already cheaper than new large reactors. The long time -- a decade or more -- that it will take to certify SMRs will do little or nothing to help with the global warming problem and will actually complicate current efforts underway. For example, the current schedule for commercializing the above-ground sodium cooled reactor in Japan extends to 2050, making it irrelevant to addressing the climate problem. Relying on assurances that SMRs will be cheap is contrary to the experience about economies of scale and is likely to waste time and money, while creating new safety and proliferation risks, as well as new waste disposal problems."

#### No ozone impact

Ridley 12 [Matt Ridley, columnist for The Wall Street Journal and author of *The Rational Optimist: How Prosperity Evolves,* 8/17, “Apocalypse Not: Here’s Why You Shouldn’t Worry About End Times”, http://www.wired.com/wiredscience/2012/08/ff\_apocalypsenot/all/]

The threat to the ozone layer came next. In the 1970s scientists discovered a decline in the concentration of ozone over Antarctica during several springs, and the Armageddon megaphone was dusted off yet again. The blame was pinned on chlorofluorocarbons, used in refrigerators and aerosol cans, reacting with sunlight. The disappearance of frogs and an alleged rise of melanoma in people were both attributed to ozone depletion. So too was a supposed rash of blindness in animals: Al Gore wrote in 1992 about blind salmon and rabbits, while The New York Times reported “an increase in Twilight Zone-type reports of sheep and rabbits with cataracts” in Patagonia. But all these accounts proved incorrect. The frogs were dying of a fungal disease spread by people; the sheep had viral pinkeye; the mortality rate from melanoma actually leveled off during the growth of the ozone hole; and as for the blind salmon and rabbits, they were never heard of again.¶ There was an international agreement to cease using CFCs by 1996. But the predicted recovery of the ozone layer never happened: The hole stopped growing before the ban took effect, then failed to shrink afterward. The ozone hole still grows every Antarctic spring, to roughly the same extent each year. Nobody quite knows why. Some scientists think it is simply taking longer than expected for the chemicals to disintegrate; a few believe that the cause of the hole was misdiagnosed in the first place. Either way, the ozone hole cannot yet be claimed as a looming catastrophe, let alone one averted by political action.

#### No ocean acidification impact---CO2’s impact is positive on most marine life

Craig Idso et al 12, founder and chairman of the board of the Center for the Study of Carbon Dioxide and Global Change, member of the American Association for the Advancement of Science, American Geophysical Union, American Meteorological Society, Arizona-Nevada Academy of Sciences, and Association of American Geographers; Sherwood Idso, research physicist with the USDA's Agricultural Research Service at the US Water Conservation Laboratory and adjunct professor at the ASU Office of Climatology; and Keith Idso, Vice President of the Center for the Study of Carbon Dioxide and Global Change, July 11, 2012, “The Potential for Adaptive Evolution to Enable the World's Most Important Calcifying Organism to Cope with Ocean Acidification,” CO2 Science, Vol. 15, No. 28

In an important paper published in the May 2012 issue of Nature Geoscience, Lohbeck et al. write that "our present understanding of the sensitivity of marine life to ocean acidification is based primarily on **short-term experiments**," which often depict negative effects. However, they go on to say that phytoplanktonic species with short generation times "may be able to respond to environmental alterations through adaptive evolution." And with this tantalizing possibility in mind, they studied, as they describe it, "the ability of the world's single most important calcifying organism, the coccolithophore Emiliania huxleyi, to evolve in response to ocean acidification in two 500-generation selection experiments."

Working with freshly isolated genotypes from Bergen, Norway, the three German researchers grew them in batch cultures over some 500 asexual generations at three different atmospheric CO2 concentrations - ambient (400 ppm), medium (1100 ppm) and high (2200 ppm) - where the medium CO2 treatment was chosen to represent the atmospheric CO2 level projected for the beginning of the next century. This they did in a multi-clone experiment designed to provide existing genetic variation that they said "would be readily available to genotypic selection," as well as in a single-clone experiment that was initiated with one "haphazardly chosen genotype," where evolutionary adaptation would obviously require new mutations. So what did they learn?

Compared with populations kept at ambient CO2 partial pressure, Lohbeck et al. found that those selected at increased CO2 levels "exhibited higher growth rates, in both the single- and multi-clone experiment, when tested under ocean acidification conditions." Calcification rates, on the other hand, were somewhat lower under CO2-enriched conditions in all cultures; but the research team reports that they were "up to 50% higher in adapted [medium and high CO2] compared with non-adapted cultures." And when all was said and done, they concluded that "contemporary evolution could help to maintain the functionality of microbial processes at the base of marine food webs in the face of global change [our italics]."

In other ruminations on their findings, the marine biologists indicate that what they call the swift adaptation processes they observed may "have the potential to affect food-web dynamics and biogeochemical cycles on timescales of a few years, thus surpassing predicted rates of ongoing global change including ocean acidification." And they also note, in this regard, that "a recent study reports surprisingly high coccolith mass in an E. huxleyi population off Chile in high-CO2 waters (Beaufort et al., 2011)," which observation is said by them to be indicative of "across-population variation in calcification, in line with findings of rapid microevolution identified here."

## 1NR

#### 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."

# Water Adv

## 1NC

#### Status quo solves and nuclear desalination is ineffective

Gar Smith 11, Editor Emeritus of Earth Island Journal, a former editor of Common Ground magazine, a Project Censored Award-winning journalist, and co-founder of Environmentalists Against War, "NUCLEAR ROULETTE: THE CASE AGAINST A NUCLEAR RENAISSANCE," June, International Forum on Globalization series focused on False Solutions, http://ifg.org/pdf/Nuclear\_Roulette\_book.pdf

By 2025, 3.5 billion people will face severe fresh-water shortages. Nuclear proponents groping for justifications to expand nuclear power have argued that the waste heat from power plants can provide a “cheap and clean” solution to the inherently costly process of removing salt from seawater. Desalination plants (there are 13,080 worldwide, mostly oil- and gas-fired and mostly in wealthy desert nations) already produce more than 12 billion gallons of drinkable water a day. 153 The first nuclear desalinator was installed in Japan in the late 1970s and scores of reactor-heated desalination plants are operating around the world today.¶ But **nuclear desalination is another False Solution**. The problem with atomic water-purifiers is that using heat to treat seawater is an obsolete 20 th -century technology. Thermal desalination has given way to new reverse osmosis systems that are less energy intensive and 33 times cheaper to operate. 154 Nuclear desalination advocates claim that wind, solar, and wave power aren’t up to the task while new low-temperature evaporation technology may be able to produce high purity water at temperatures as low as 122° Fahrenheit. 155 Promoting reactors as a solution to the world’s water shortage is especially ludicrous since nuclear power plants consume more water than any other energy source. 156¶ Even proponents admit there is a potential risk that running seawater through a radioactive environment might contaminate the drinking water produced. 157 Undeterred, scientists in Russia and India have proposed anchoring small atom-powered water-plants offshore near densely populated coastal cities. But this would provide no relief for the billions of people living inland in water-starved regions of North Africa and Asia.¶ Desalination is merely a way of giving a marginal new purpose to existing reactors whose balance sheets would be improved if they were retrofitted with desalination chambers. As with power generation, so with desalination: efficiency in water use (better irrigation technology, crop selection, eliminating transit losses, etc.) beats new production.¶ A real solution to the growing global water shortage needs to address the increasing amount of water diverted to wasteful agricultural and industrial practices and concentrate on preventing the water from being contaminated in the first place—by, among other things, capping the size of local populations to match locally available water supplies.

## 2NC

#### SMR’s for desalination already exist

World Nuclear Association, July 2012, “Nuclear Desalination,” http://www.world-nuclear.org/info/inf71.html

SMART: South Korea has developed a small nuclear reactor design for cogeneration of electricity and potable water. The 330 MWt SMART reactor (an integral PWR) has a long design life and needs refuelling only every 3 years. The main concept has the SMART reactor coupled to four MED units, each with thermal-vapour compressor (MED-TVC) and producing total 40,000 m3/day, with 90 MWe.

CAREM: Argentina has designed an integral 100 MWt PWR suitable for cogeneration or desalination alone, and a prototype in being built next to Atucha. A larger version is envisaged, which may be built in Saudi Arabia. NHR-200: China's INET has developed this, based on a 5 MW pilot plant. Floating nuclear power plant (FNPP) from Russia, with two KLT-40S reactors derived from Russian icebreakers, or other designs for desalination. (If primarily for desalination the twin KLT-40 set-up is known as APVS-80.) ATETs-80 is a twin-reactor cogeneration unit using KLT-40 and may be floating or land-based, producing 85 MWe plus 120,000 m3/day of potable water. The small ABV-6 reactor is 38 MW thermal, and a pair mounted on a 97-metre barge is known as Volnolom floating NPP, producing 12 MWe plus 40,000 m3/day of potable water by reverse osmosis. A larger concept has two VBER-300 reactors in the central pontoon of a 170 m long barge, with ancillary equipment on two side pontoons, the whole vessel being 49,000 dwt. The plant is designed to be overhauled every 20 years and have a service life of 60 years. Another design, PAES-150, has a single VBER-300 unit on a 25,000 dwt catamaran barge.

#### Empirically disproven and shortages incentivize cooperation

Ken Conca 12, professor at American University's School of International Service, where he directs the Global Environmental Politics Program, "Decoupling Water and Violent Conflict," Fall, Issues in Science & Technology, Vol. 29 Issue 1, Academic Search Premier

The good news is that although countries may sometimes use bellicose rhetoric when discussing water supplies, there are no significant examples in the historical record of countries going to war over water. The most comprehensive study to date, which looked at water-related events in shared river basins during the second half of the 20th century, found that cooperative events, such as treaties, scientific exchanges, or verbal declarations of cooperation, outnumbered instances of conflict, such as verbal hostility, coercive diplomacy, or troop mobilization, by roughly two to one; and that even the most severe episodes of conflict stopped short of outright warfare. Moreover, when conflict episodes did occur, they were typically not the result of water scarcity. Rather, the key factor was the inability of governments to adapt to rapid changes, such as when part of a country split off to become a new one or when a decision to build a large dam was made without consulting downstream neighbors. The reasons for the lack of violent conflict are not surprising: War between nations is an increasingly rare event in world politics, water relations are embedded in broader relations between countries, and there are far less costly alternatives than war to improve water availability or efficiency of use. Well-designed cooperative agreements can go a long way toward managing shared rivers in a fair and peaceful manner.

#### No Indo-Pak war

Mutti 9— Master’s degree in International Studies with a focus on South Asia, U Washington. BA in History, Knox College. over a decade of expertise covering on South Asia geopolitics, Contributing Editor to Demockracy journal (James, 1/5, Mumbai Misperceptions: War is Not Imminent, http://demockracy.com/four-reasons-why-the-mumbai-attacks-wont-result-in-a-nuclear-war/)

Fearful of imminent war, the media has indulged in frantic hand wringing about Indian and Pakistani nuclear arsenals and renewed fears about the Indian subcontinent being “the most dangerous place on earth.” As an observer of the subcontinent for over a decade, I am optimistic that war will not be the end result of this event. As horrifying as the Mumbai attacks were, they are not likely to drive India and Pakistan into an armed international conflict. The media frenzy over an imminent nuclear war seems the result of the media being superficially knowledgeable about the history of Indian-Pakistani relations, of feeling compelled to follow the most sensationalistic story, and being recently brainwashed into thinking that the only way to respond to a major terrorist attack was the American way – a war. Here are four reasons why the Mumbai attacks will not result in a war: 1. For both countries, a war would be a disaster. India has been successfully building stronger relations with the rest of the world over the last decade. It has occasionally engaged in military muscle-flexing (abetted by a Bush administration eager to promote India as a counterweight to China and Pakistan), but it has much more aggressively promoted itself as an emerging economic powerhouse and a moral, democratic alternative to less savory authoritarian regimes. Attacking a fledgling democratic Pakistan would not improve India’s reputation in anybody’s eyes. The restraint Manmohan Singh’s government has exercised following the attacks indicates a desire to avoid rash and potentially regrettable actions. It is also perhaps a recognition that military attacks will never end terrorism. Pakistan, on the other hand, couldn’t possibly win a war against India, and Pakistan’s military defeat would surely lead to the downfall of the new democratic government. The military would regain control, and Islamic militants would surely make a grab for power – an outcome neither India nor Pakistan want. Pakistani president Asif Ali Zardari has shown that this is not the path he wants his country to go down. He has forcefully spoken out against terrorist groups operating in Pakistan and has ordered military attacks against LeT camps. Key members of LeT and other terrorist groups have been arrested. One can hope that this is only the beginning, despite the unenviable military and political difficulties in doing so. 2. Since the last major India-Pakistan clash in 1999, both countries have made concrete efforts to create people-to-people connections and to improve economic relations. Bus and train services between the countries have resumed for the first time in decades along with an easing of the issuing of visas to cross the border. India-Pakistan cricket matches have resumed, and India has granted Pakistan “most favored nation” trading status. The Mumbai attacks will undoubtedly strain relations, yet it is hard to believe that both sides would throw away this recent progress. With the removal of Pervez Musharraf and the election of a democratic government (though a shaky, relatively weak one), both the Indian government and the Pakistani government have political motivations to ease tensions and to proceed with efforts to improve relations. There are also growing efforts to recognize and build upon the many cultural ties between the populations of India and Pakistan and a decreasing sense of animosity between the countries. 3. Both countries also face difficult internal problems that present more of a threat to their stability and security than does the opposite country. If they are wise, the governments of both countries will work more towards addressing these internal threats than the less dangerous external ones. The most significant problems facing Pakistan today do not revolve around the unresolved situation in Kashmir or a military threat posed by India. The more significant threat to Pakistan comes from within. While LeT has focused its firepower on India instead of the Pakistani state, other militant Islamic outfits have not. Groups based in the tribal regions bordering Afghanistan have orchestrated frequent deadly suicide bombings and clashes with the Pakistani military, including the attack that killed ex-Prime Minister Benazir Bhutto in 2007. The battle that the Pakistani government faces now is not against its traditional enemy India, but against militants bent on destroying the Pakistani state and creating a Taliban-style regime in Pakistan. In order to deal with this threat, it must strengthen the structures of a democratic, inclusive political system that can also address domestic problems and inequalities. On the other hand, the threat of Pakistani based terrorists to India is significant. However, suicide bombings and attacks are also carried out by Indian Islamic militants, and vast swaths of rural India are under the de facto control of the Maoist guerrillas known as the Naxalites. Hindu fundamentalists pose a serious threat to the safety of many Muslim and Christian Indians and to the idea of India as a diverse, secular, democratic society. Separatist insurgencies in Kashmir and in parts of the northeast have dragged on for years. And like Pakistan, India faces significant challenges in addressing sharp social and economic inequalities. Additionally, Indian political parties, especially the ruling Congress Party and others that rely on the support of India’s massive Muslim population to win elections, are certainly wary about inflaming public opinion against Pakistan (and Muslims). This fear could lead the investigation into the Mumbai attacks to fizzle out with no resolution, as many other such inquiries have. 4. The international attention to this attack – somewhat difficult to explain in my opinion given the general complacency and utter apathy in much of the western world about previous terrorist attacks in places like India, Pakistan, and Indonesia – is a final obstacle to an armed conflict. Not only does it put both countries under a microscope in terms of how they respond to the terrible events, it also means that they will feel international pressure to resolve the situation without resorting to war. India and Pakistan have been warned by the US, Russia, and others not to let the situation end in war. India has been actively recruiting Pakistan’s closest allies – China and Saudi Arabia – to pressure Pakistan to act against militants, and the US has been in the forefront of pressing Pakistan for action. Iran too has expressed solidarity with India in the face of the attacks and is using its regional influence to bring more diplomatic pressure on Pakistan.

#### No Middle East war

Salem 11—Director of the Carnegie Middle East Center. PhD from Harvard (Paul, 'Arab Spring' Has Yet to Alter Region's Strategic Balance, carnegie-mec.org/publications/?fa=43907)

Despite their sweeping repercussions for both domestic and international players, the Arab uprisings have not led to a dramatically new regional order or a new balance of power. This could change, particularly if developments in Syria continue to escalate.

While Iran has welcomed uprisings against Western-backed regimes in Egypt and Tunisia, it dealt harshly with its own protesters and has been worried about recent events in Syria. Moreover, countries that threw out pro-Western dictators are not moving closer to Iran.

Egypt's and Tunisia’s future foreign policies are more likely to resemble Turkey's in becoming more independent while remaining allied with the West. And Iran's soft power has decreased as its regime looks increasingly repressive and new models of revolutionary success have emerged in Tunisia, Egypt, and other parts of the Arab world.

Turkey, for its part, bungled the opportunity to take advantage of this historic shift to bolster its influence in the Arab world. The Arab uprisings are effectively calling for the Arab world to be more like Turkey: democratic, with a vibrant civil society, political pluralism, secularism alongside Islam, and a productive and fairly balanced economy. However, after expressing clear support for Egyptian protesters, Turkey has hedged its bets in Libya and Syria.

Turkey has over $15 billion in business contracts with Moammar Kadafi's Libya and has built a close relationship with Syrian President Bashar Assad. Turkey's foreign policy of "zero problems" with neighbors is becoming harder to implement as peoples and governments in the neighborhood are increasingly on opposite sides.

Although Arab public opinion has held Turkey in very high esteem in past years, recent events have tarnished that image. This could have been Turkey's moment in the Middle East; the moment was lost.

Saudi Arabia has been taken aback by the loss of old allies and remains worried about increased Iranian influence, but has maintained its sphere of influence. Its military intervention in Bahrain shows that Riyadh is extremely worried not only about Iranian influence but about the wave of democratic change, and still has not figured out a way to achieve a balance between addressing growing demands by citizens for better governance and social justice, while keeping Iranian influence out of the Gulf Cooperation Council.

Although the United States has generally suffered setbacks from the events of the past months, it is adjusting quickly to the new realities and stands to remain a key player in the coming period. It has not lost its leverage despite the demise of its main Egyptian and Tunisian allies, and has expressed support for protests after realizing they were not dominated by radical groups and that they echoed Western values.

Emerging global powers such as Russia, China, India and Brazil have had mixed reactions to the "Arab Spring." All were reluctant to approve Western-led military intervention in Libya, expressing concerns ranging from the risk of higher oil prices to a potential spillover effect on their shores.

As for Israel, even though its peace treaty with Egypt will remain in place, it no longer has any friends in the region after the departure of Egyptian President Hosni Mubarak, its declining relations with Turkey and growing unrest in Jordan. The recent Fatah-Hamas accord underlines Israel's predicament. Two difficult challenges lie ahead: The Palestinian Authority's unilateral move to declare Palestinian statehood by the end of the year and a potential Palestinian popular uprising encouraged by the success of neighboring populations.

Although the Arab Spring has been largely about internal democracy and reform, it has affected all of the major regional and international actors. However, so far there has been no major shift in the balance of power or the basic pattern of regional relations.

# Grid Adv

## 1NC

### Grid---Squo Solves---Islanding---1NC

#### Status quo solves islanding---the military figured out their advantage and fixed it

Michael Aimone 9-12, Director, Business Enterprise Integration, Office of the Deputy Under Secretary of Defense (Installations and Environment), 9/12/12, Statement Before the House Committee on Homeland Security, Subcommittee on Cybersecurity, Infrastructure Protection and Security Technologies, http://homeland.house.gov/sites/homeland.house.gov/files/Testimony%20-%20Aimone.pdf

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

Standby Power Generation

Currently, DoD ensures that it can continue mission critical activities on base largely through its fleet of on-site power generation equipment. This equipment is connected to essential mission systems and automatically operates in the event of a commercial grid outage. In addition, each installation has standby generators in storage for repositioning as required. Facility power production specialists ensure that the generators are primed and ready to work, and that they are maintained and fueled during an emergency. With careful maintenance these generators can bridge the gap for even a lengthy outage. As further back up to this installed equipment, DoD maintains a strategic stockpile of electrical power generators and support equipment that is kept in operational readiness. For example, during Hurricane Katrina, the Air Force transported more than 2 megawatts of specialized diesel generators from Florida, where they were stored, to Keesler Air Force Base in Mississippi, to support base recovery.

### Heg Impact D

#### No heg impact

Preble 10 – Former prof, history, Temple U. PhD, history, Temple (Christopher, U.S. Military Power: Preeminence for What Purpose?, 3 August, http://www.cato-at-liberty.org/u-s-military-power-preeminence-for-what-purpose/)

Goure and the Hadley-Perry commissioners who produced the alternate QDR argue that the purpose of American military power is to provide global public goods, to defend other countries so that they don’t have to defend themselves, and otherwise shape the international order to suit our ends. In other words, the same justifications offered for American military dominance since the end of the Cold War. Most in Washington still embraces the notion that America is, and forever will be, the world’s indispensable nation. Some scholars, however, questioned the logic of hegemonic stability theory from the very beginning. A number continue to do so today. They advance arguments diametrically at odds with the primacist consensus. Trade routes need not be policed by a single dominant power; the international economy is complex and resilient. Supply disruptions are likely to be temporary, and the costs of mitigating their effects should be borne by those who stand to lose --- or gain --- the most. Islamic extremists are scary, but hardly comparable to the threat posed by a globe-straddling Soviet Union armed with thousands of nuclear weapons. It is frankly absurd that we spend more today to fight Osama bin Laden and his tiny band of murderous thugs than we spent to face down Joseph Stalin and Chairman Mao. Many factors have contributed to the dramatic decline in the number of wars between nation-states; it is unrealistic to expect that a new spasm of global conflict would erupt if the United States were to modestly refocus its efforts, draw down its military power, and call on other countries to play a larger role in their own defense, and in the security of their respective regions. But while there are credible alternatives to the United States serving in its current dual role as world policeman / armed social worker, the foreign policy establishment in Washington has no interest in exploring them. The people here have grown accustomed to living at the center of the earth, and indeed, of the universe. The tangible benefits of all this military spending flow disproportionately to this tiny corner of the United States while the schlubs in fly-over country pick up the tab.

## 1NR

#### Full islanding not key---DOD doesn’t want it

Annie Snider 12, E&E reporter, 1/16/12, “Pentagon still can't define 'energy security,' much less achieve it,” http://www.eenews.net/public/Greenwire/2012/01/16/1

Some argue that all military facilities should be able to operate off the grid for an unlimited period of time, a concept called "islanding." But full islanding has fallen out of favor with most Pentagon officials, who say that even with such capabilities, a base would not be able to operate for long if its neighbors were devastated, at minimum because most service members live with their families off-base.

"If the grid is down for days and everything in the nearby town is out, but you've got a lit up base -- what kind of message does that send?" asked Kevin Geiss, deputy assistant secretary for energy for the Air Force. "We either need to be prepared to figure out how we can also support outside the fence, or maybe that's not the solution."

Geiss argues that the focus should be on building a system that lets the most important missions stay up for as long as necessary, while letting go of lower-priority missions during outages. The Defense Science Board also took this tack and included a classified appendix to its report that lists facilities where the board believed building this limited form of islanding is most important.

What this would actually mean depends on the installation. Sites focused on training may be able to stay offline for a while, but facilities involved with battlefield missions like drone flights or real-time intelligence analysis likely cannot afford a gap. It would also depend on the circumstances surrounding the outage. During a natural disaster like Hurricane Katrina, for instance, facilities that would not normally be prioritized could become critical as regional relief centers.

"If all I could produce is 20 megawatts, I want to be able to do that 20 megawatts at the most important facility on the installation at that time," said Coby Jones, who manages the energy program at the Army's Fort Bragg in North Carolina.

"The situation and the mission determine what buildings are critical," he explained. "If it's just a natural disaster, different facilities are more important than others. If it is a military situation or mission that's going on, it's other facilities that need to have power to them. It's hard to put your finger on which building is most important and how to define that, because it is a sliding scale."

#### The grid is air-gapped

Michael Tanji 10, spent 20 years in the US intelligence community; veteran of the US Army; served in strategic and tactical assignments worldwide; participated in national and international analysis and policy efforts for the NIC, NSC and NATO; Claremont Institute Lincoln Fellow and Senior Fellow at the Center of Threat Awareness; lectures on intelligence issues at The George Washington University, 7/13/10, “Hacking the Electric Grid? You and What Army?,” http://www.wired.com/dangerroom/2010/07/hacking-the-electric-grid-you-and-what-army/

Grid-hacking is back in the news, with the unveiling of “Perfect Citizen,” the National Security Agency’s creepily named effort to protect the networks of electrical companies and nuclear power plants.

People have claimed in the past to be able to turn off the internet, there are reports of foreign penetrations into government systems, “proof” of foreign interest in attacking U.S. critical infrastructure based on studies, and concerns about adversary capabilities based on allegations of successful critical infrastructure attacks. Which begs the question: If it’s so easy to turn off the lights using your laptop, how come it doesn’t happen more often?

The fact of the matter is that it isn’t easy to do any of these things. Your average power grid or drinking-water system isn’t analogous to a PC or even to a corporate network. The complexity of such systems, and the use of proprietary operating systems and applications that are not readily available for study by your average hacker, make the development of exploits for any uncovered vulnerabilities much more difficult than using Metasploit.

To start, these systems are rarely connected directly to the public internet. And that makes gaining access to grid-controlling networks a challenge for all but the most dedicated, motivated and skilled — nation-states, in other words.

#### Empirically proven

Geller 99**---**Geller and Singer, 99 – \*Chair of the Department of Political Science @ Wayne State University (Daniel S and Joel David, Nations at war: a scientific study of international conflict, p. 116-117)

**Note – Hopf = Visiting Professor of Peace Research, The Mershon Center, Ohio State University PhD in pol sci from Columbia.**

**Levy = Board of Governors’ Professor of Political Science at Rutgers University and an Affiliate at the Arnold A. Saltzman Institute of War and Peace Studies at Columbia University. Past president of the International Studies Association and of the Peace Science Society. Has held tenured positions at the UT Austin, and U Minnesota, and visiting positions at Stanford, Harvard, Yale University, Columbia, Tulane, and NYU. Received the American Political Science Association’s Award for the best dissertation in IR as well as the Distinguished Scholar Award from the Foreign Policy Analysis Section of the International Studies Association. PhD**

Hopf (1991) and Levy (1984) examine the frequency, magnitude and severity of wars using polarity (Hopf) and “system size” (Levy) as predictors. Hopf’s database includes warfare in the European subsystems for the restricted temporal period of 1495–1559. The system is classified as multipolar for the years 1495–1520 and as bipolar for the years 1521–1559. Hopf reports that the amount of warfare during those two periods was essentially equivalent. He concludes that polarity has little relationship to patterns of war for the historical period under examination. Levy (1984) explores a possible linear association between the number of great powers (system size) and war for the extended temporal span of 1495 – 1974. His findings coincide with those of Hopf; he reports that the frequency, magnitude and severity of war in the international system is unrelated to the number of major powers in the system.

# T

## 1NC

#### Financial incentives include funding and loan guarantees; aff is a non-financial incentive

**Czinkota et al, 9 -** Associate Professor at the McDonough School of Business at Georgetown University (Michael, Fundamentals of International Business, p. 69 – google books)

Incentives offered by policymakers to facilitate foreign investments are mainly of three types: fiscal, financial, and nonfinancial. **Fiscal incentives** are specific tax measures designed to attract foreign investors. They typically consist of special depreciation allowances, tax credits or rebates, special deductions for capital expenditures, tax holidays, and the reduction of tax burdens. **Financial incentives** offer special funding for the investor by providing, for example, land or buildings, loans, and loan guarantees. **Nonfinancial incentives** include guaranteed government purchases; special protection from competition through tariffs, import quotas, and local content requirements, and investments in infrastructure facilities.

#### Voting issue for ground and competitive equity---allowing procurement blows the lid off of available mechanisms for each of the six energies

## 2NC

#### That is almost limitless

Leos 2007 [Leonard Leos ¶ Paul Rouleau ¶ Mark Wadsworth ¶ June 2007 Naval Post Graduate School MBA PROFESSIONAL REPORT ¶ “Budget Scoring of Alternative Financing¶ Methods for Defense Requirements” http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA473232]

Alternative financing consists of almost any financing option or combination of ¶ options that can be used in lieu of conventional full-funding. The private sector has ¶ metrics such as profit or stock price that help motivate corporate executives in their ¶ selection of the most beneficial financing method for their company. Without these ¶ incentives, the federal budget process remains a delicate balance between agency needs ¶ and Congressional control of the purse. Current scoring guidelines are designed to ¶ provide the decision-makers in Congress with the most informative representation of ¶ current and future government obligations. The legislation also has the effect of biasing ¶ full-funding versus other forms of financing. Yet, in certain situations, the needs and ¶ resources of the government can be combined with the capabilities of the private sector to ¶ form a partnership that is beneficial to both parties. Public-private Partnerships represent ¶ the most practical financing method available that harnesses these capabilities and ¶ addresses the needs of the DoD.

#### Alternative financing includes PPP’s means they don’t have to use cash

Leos 2007 [Leonard Leos ¶ Paul Rouleau ¶ Mark Wadsworth ¶ June 2007 Naval Post Graduate School MBA PROFESSIONAL REPORT ¶ “Budget Scoring of Alternative Financing¶ Methods for Defense Requirements” http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA473232]

PPPs can be used by the government to affordably take advantage of an ¶ underutilized asset, benefiting from private-sector expertise, or leverage private-sector ¶ financing in the short-term to acquire a public asset. Leasing may only be small part of ¶ the PPP. In some cases, the government may benefit from the revenue a leased asset ¶ generates rather than benefit from the use of an asset—serving as the lessor rather than ¶ the lessee (CBO, 2003, p. 26). Unfortunately, the Budget Committees, OMB and CBO ¶ are typically conservative in their scoring of these arrangements and typically do not ¶ discount the inherent benefits of these contracts from the overall budget authority ¶ assigned to the contract. The result is up-front budget authority scoring for the project, ¶ which may exclude the legislation from being passed. In Case Study Number One, ¶ various alternative financing strategies involving governmental housing and buildings ¶ will be examined for potential applications to finance military capital acquisitions. In ¶ another Case Study, share-in-savings contracts will be examined utilizing the Energy ¶ Savings Performance Contracts case. Together, these case studies will demonstrate how ¶ current scoring guidelines are used to score alternative financing arrangements based ¶ solely on the financial obligation without sufficient regard to the program’s benefits.

#### In fact most likely they will barter for the power

Leos 2007 [Leonard Leos ¶ Paul Rouleau ¶ Mark Wadsworth ¶ June 2007 Naval Post Graduate School MBA PROFESSIONAL REPORT ¶ “Budget Scoring of Alternative Financing¶ Methods for Defense Requirements” http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA473232]

In a 2003 study by the GAO, PPPs were identified as the most prevalent ¶ ¶ alternative financing method, with over 54 different agreements in existence within U.S. 16¶ ¶ agencies (GAO, 2003, August). PPPs are a particularly popular alternative-financing ¶ ¶ technique for the DoD due to their great flexibility and ability to apply private-sector ¶ ¶ capital and expertise to public needs and resources. In this symbiotic relationship, each ¶ ¶ party benefits from its participation in the partnership. The government is unable to be ¶ ¶ the most efficient provider of all necessary services and equipment items for the public ¶ ¶ sector. OMB Circular A-76 acknowledges this reality and provides guidelines with which ¶ ¶ to outsource public requirements to the private sector and promote efficiency (OMB, ¶ ¶ 2003). In some cases, adaptable technologies or industrial capacity already exist in the ¶ ¶ private sector that could address the requirements of the military. A PPP can be formed ¶ ¶ to exploit these opportunities in a manner conventional full-funding procurement cannot. ¶ ¶ Despite the efficiencies of PPPs, the scoring of PPP legislation has become ¶ ¶ increasingly conservative—limiting the flexibility originally granted by statuary authority ¶ ¶ to several Federal agencies. The CBO and OMB believe that Federal agencies are using ¶ ¶ special purpose public-private ventures as a way to access private capital without ¶ ¶ triggering lease-purchase guidelines and to avoid recording obligations up-front in their ¶ ¶ budgets. This section will discuss these concerns and other scoring issues using several ¶ ¶ examples from the DoD’s privatization of military housing and the VA’s enhanced-use ¶ ¶ lease authority. ¶ ¶ The majority of PPPs involve the Federal Government’s real property or other ¶ ¶ underutilized assets that can be developed, revitalized, or managed by the private sector. ¶ ¶ The key element of a PPP is that the government possesses some non-monetary asset that ¶ ¶ has value to the private sector. In a typical fully funded contract, the government must ¶ ¶ set aside funds sufficient to cover all obligations in the first year of the project. In PPP ¶ ¶ agreements, the government is able to barter an asset or use existing conditions in lieu of ¶ ¶ full payment to reduce their obligations. These assets can include loan guarantees, longer ¶ ¶ lease terms, debt issuance, guaranteed minimum rates of occupancy, or even the transfer ¶ ¶ of the asset at the completion of the lease term. Figure 1 depicts the wide degree of ¶ ¶ versatility of PPP contracts in managing responsibility throughout the life of an asset.

#### Webb is Canadian and means his distinctions on incentives don’t apply

MacNevin 93, Alex -Tax Evaluation Division – Federal Department of Finance, 31 Alta. L. Rev. 539

Not surprisingly, Mr. Webb's perspective is primarily legal in focus; he is concerned with what he views as deficiencies in legal structure and channels of legal authority and recourse. As an economist, I am not qualified to discuss the legal issues raised by Mr. Webb. However, his passing reference, in a related paper to be delivered at this conference, refers to the Auditor General's estimates that there are $41 billion and $28 billion in, respectively, direct expenditure incentives and tax expenditure incentives.1 Incentives are thus ultimately about money -- that is, who gets it, why, how, how much, what is the effect and how is this accounted for -- and therefore have important economic as well as legal dimensions. While Mr. Webb's paper deals with both expenditure and tax incentives, my comments concentrate on the latter, with which I am most familiar.¶ II. THE IDENTIFICATION OF TAX INCENTIVES¶ One fundamental problem with respect to accountability in the area of taxation arises because of difficulties in defining what is or is not a tax expenditure or a tax incentive. A central aspect of accountability relates to the seemingly simple basic requirement for documenting the amounts of money foregone through various incentives. Mr. Webb notes that information on the costs of tax incentives are reported only sporadically in tax expenditure accounts, the last of which was put out by the Minister of Finance in 1985. He also points out that tax incentives are removed from the normal budgeting and estimating procedures that apply to many other incentives on the expenditure side (which, incidentally, he views as generally deficient).¶ The infrequent release of tax expenditures (or, as they were called in the 1985 document, selective tax measures) tables may in part reflect the absence of a legal requirement that they be produced on a regular basis.2 They also, however, reflect significant conceptual difficulties encountered in constructing such accounts as well as prevailing concerns about the extent of their usefulness, including their interpretation. Difficulties in this regard were highlighted in a 1988 conference on tax expenditures and accountability in taxation that was jointly sponsored by the Department of Finance and the John Deutsch Institute of Queen's University.3¶ In the opinion of many of the public finance experts who participated in the conference, tax expenditures often cannot easily be distinguished from structural parameters of the tax system. Identification of tax incentives necessitates comparison of the actual tax system with an ideal "benchmark" tax system. This is entirely different from the case of direct expenditures where no comparable reference base is required. One practical difficulty confronting tax expenditure accounting is that any view about what the tax base should be is essentially a value judgement and hence will vary from individual to individual. The result is that items which may be viewed as tax expenditures under one particular benchmark tax system may not be viewed as such under another benchmark. For example, tax deductions for retirement savings plans are a tax expenditure under an annual income tax benchmark, but are not tax expenditures under lifetime income tax or consumption tax benchmarks. Since the federal tax system contains a mixture of elements of all three of these tax regimes, considerable difficulties in identifying tax expenditures exist.¶ Related additional complexities arise because an actual tax system can only approximate the desirable characteristics of any particular normative view as to what should be taxed. For example, while economists may be able to define fairly precisely what real economic income is over a particular period of time under an income tax base, it is impractical to design an income tax system that has the actual characteristics dictated by theory. The result of is that in some instances, it is not clear how a particular tax measure or group of related tax measures should be viewed under an actual tax system that is inevitably only an imperfect approximation of a chosen "benchmark" tax system.4¶ Many examples can be given to illustrate the difficulties that arise in this respect. For example, considerable uncertainty arises about how the various provisions relating to the taxation of capital gains should be treated for tax expenditure accounting purposes under an income tax regime that taxes nominal gains on a realization basis rather than real gains on an accrual basis. The integration of the personal and corporate income tax systems gives rise to other examples. Under a view that treats the integrated personal and corporated tax systems as the benchmark, the dividend tax credit is not a tax expenditure. Under one that treats the personal and corporate tax systems as separate benchmark systems, it is.¶ The tax expenditure treatment of cash accounting for farmers and fishermen provides another example. Economists are uncomfortable on tax principle grounds with the deductibility of expenditures on inventory because such expenditures merely reflect the transfer of one asset (cash) into another asset (inventory). Accrual accounting rules, which are required of other types of businesses, effectively result in unsold inventories being added back into income at the end of the year so that no deduction in the year is permitted. Past tax expenditure accounts have identified cash accounting as a tax expenditure, although it is far from obvious that, at least for full-time farmers and fishermen, cash accounting on balance results in lower tax liabilities over time or that from their perspective it is anything more than a peculiar tax wrinkle. It is notable that there is no dollar estimate of the value of cash accounting in previous tax expenditure accounts.¶ III. THE ACCOUNTABILITY OF TAX INCENTIVES¶ One common theme that emerged from the conference on tax expenditures and accountability was that, in light of the many difficulties in identifying tax expenditures, it might be desirable to present tax expenditure information from the perspective of a number of different normative benchmark systems. This would highlight aspects of the tax system from these different perspectives. It would, however, achieve this at the cost of considerable added complexity in interpreting the accounts, particularly to users of the accounts who were not tax experts. There may, therefore, be somewhat of a conflict between the usefulness of tax expenditure accounts in their role as an instrument of tax analysis versus their role as an accountability instrument where clarity and simplicity of presentation and interpretation have high priority. It may be possible to strike a compromise by, for example, ensuring that tax expenditure accounts clearly identify the key tax measures that most reasonably could be substituted for direct expenditure programs. This would facilitate comparisons of tax expenditures data with those for comparable programs on the direct expenditure side in the Public Accounts and thereby permit a more complete assessment of the incentives and subsidies applying to particular sectors, geographical regions, and so on. Such an approach would foster the accountability objective of "functional equivalence" identified by Mr. Webb.¶ Problems with compiling tax expenditures accounts are highlighted when the very structure of the tax system undergoes major changes, such as with the income tax reform of 1988 and with the introduction of the GST to replace the manufacturers sales tax. In such circumstances, presentation of tax expenditure information must be thoroughly reformulated to reflect the revised tax regimes and, indeed, the changing benchmark norms. This can give rise to problems of lack of continuity and comparability of data over time. As an additional practical matter, significant lags in the availability of taxation data may delay the release of tax expenditure tables that reflect the new regimes. There are two and three year lags for, respectively, personal income tax data and corporate income tax data.¶ Delays in the availability of taxation data are particularly problematic since it is typically much more difficult to forecast the ultimate cost of tax incentives than is the case for direct expenditure incentives. The main reason for this is that tax incentives are almost always open-ended while direct expenditure incentives are typically subject to an overall budget constraint. The total cost of a tax incentive thus depends entirely on the usually difficult to predict take-up response of taxpayers, which can give rise to considerable uncertainty in budgeting.5¶ There are thus significant difficulties with tax expenditure analysis even as an accounting device for providing estimates of the cost of individual tax measures. Judged by the other criteria identified above they are substantially more deficient since they provide no insight whatsoever into the questions of who benefits from tax incentives, why, and what are their effects. Analytical techniques, (such as full evaluations) in addition to accounting techniques, are required in order to provide a complete picture of both the cost and the efficacy of tax measures. I would note, however, that the problems in identifying tax expenditures, particularly in an environment of changing tax structures or norms, make it difficult to systematically evaluate tax expenditures or incentives on a routine cyclical basis as is done for direct expenditure programs.¶ The limitations of tax expenditures information naturally raise questions about the appropriate amount of scarce analytical resources that should be devoted to the preparation of tax expenditure tables, rather than to alternative or complementary tools of accountability such as in-depth studies of the rationale and cost-effectiveness of particular tax measures and related groupings of tax measures; irrespective of whether there is a consensus as to their tax expenditure status under any particular benchmark tax system. The Department of Finance has long wrestled with the practical difficulties and trade-offs involved in compiling tax expenditure data and other accountability information that is, on balance, most revealing with respect to the underlying structure of the tax system. The proceedings of the John Deutsch Conference indicate clearly that there are no easy solutions to the problems.¶ IV. CONCLUSION¶ As noted earlier, Mr. Webb also makes reference to the adequacy of current budgeting procedures for tax incentives. The problem of identifying and measuring tax incentives separately from the "normal" parameters of the tax system hints at the intimate relationship between tax expenditures or (tax incentives) policy and the more limited process of modifying and improving the tax system -- that is the strict design of tax policy. This latter process is a natural component of the government's routine budget procedures and is subject to well-known budget conventions. Procedures relating to the introduction or modification of tax incentives must therefore inevitably be conducted within that somewhat restrictive environment. Can improvements be made which reflect both the need for improved budgeting procedures for tax incentives and the unique environment in which tax measures are designed and modified? I am sure they can but I am considerably less sure that such procedures can be routinized through legislative structure or guidelines.¶ In summary, I fully support the general thrust of Mr. Webb's paper of the need for improved structures and instruments of accountability. In my view, however, the pursuit of that objective must be tempered by recognition of the significant practical obstacles that arise because of the unique characteristics of tax incentives.

#### Webb is too broad

Woodside 93, professor of political studies – University of Guelph, Kenneth, 31 Alta. L. Rev. 536

In his discussion of legal accountability, Kernaghan Webb focuses on the absence of the rule of law in many expenditure incentive programs administered by the federal government. Webb argues that many government incentive programs do not require that administrators openly account for their decisions. The flexibility given to officials through broad statutory grants of discretionary power undermines the legal accountability of their actions. Since financial incentives are regulatory in their impact, Webb suggests that they should be treated more like traditional regulatory instruments where the requirements of legal accountability are more strictly enforced. This paper is an excellent discussion of the shortcomings in legal accountability in the area of expenditure incentive programs. As well, the author recognizes the importance of financial restraint at this point in our nation's political development. In my commentary I would like to focus on two questions. First, does increased legal accountability necessarily result in greater political accountability? Second, why have our national governments not been more interested in increasing the legal accountability of these programs?

Webb's paper provides a fairly broad definition of incentives but largely focuses on those provided as expenditure subsidies. While "tax expenditures" are included in his definition, they are largely ignored in the analysis. A comparison of the extent of legal accountability in these two delivery systems suggests that the relationship between legal and political accountability is not necessarily a straightforward one. It is clear, for instance, that tax expenditures normally provide more legal accountability than expenditure incentives. Discretion on the part of administrators is more sharply constrained and avenues of appeal are more formally established in the tax system than they are in many expenditure incentive programs. Large numbers of professionals are handsomely rewarded for their expertise in understanding and manipulating these many tax rules. However a great many scholars are sharply critical of the lack of political accountability in the delivery of tax expenditures, especially when they are compared with expenditure incentives. (We will ignore the debate over the logic of the concept of tax expenditures and what constitutes the normal tax structure that tax expenditures deviate from in delivering their benefits.) Critics of tax expenditures attack their lack of public visibility: the difficulty governments have in establishing budgetary control over their use and the relative lack of scrutiny over the usage of these instruments. These failings all contribute to a diminished sense of political accountability in the delivery of tax expenditures.

#### Financial incentives excludes government purchasing---that’s voluntary or regulatory support

**Menz, 5 -** Faculty of Economics and Finance, School of Business, Clarkson University, Bertrand H. Snell Hall, Potsdam, NY, also from the Center for International Climate and Environmental Research, Oslo (CICERO), Norway (Fredric, “Green electricity policies in the United States: case study,” Energy Policy, December, Science Direct) **Italics in original**

There is considerable variation among states in both their regulatory environments and the policies that have been implemented to promote green electricity. In the following discussion, state and local policy instruments are categorized as financial incentives, rules and regulations, and voluntary measures.[7](http://www.sciencedirect.com.proxy.lib.umich.edu/science/article/pii/S0301421504001648#fn7)Financial incentives include various subsidies and/or funding in direct support of green electricity projects, tax incentives (credits, deductions, or exemptions), and provisions for zero-interest or low-interest loans. Rules and regulations include requirements that utilities distribute a minimum share of electricity from renewable or green energy sources, green power purchase requirements for government entities, and net-metering requirements for consumers with small renewable generating facilities. Voluntary measures include green power products aimed at electricity consumers, green power certificate programs, and other programs to increase market support for renewable energy technologies.

# K

#### The aff enframes the world to limit out any ontological questioning and ensures a violent monopoly on truth that results in endless warfare

Burke 7—Associate Professor of Politics and International Relations in the University of New South Wales (Anthony, *Theory & Event*, Volume 10, Issue 2, 2007, “Ontologies of War: Violence, Existence and Reason,” Project MUSE)

This essay develops a theory about the causes of war -- and thus aims to generate lines of action and critique for peace -- that cuts beneath analyses based either on a given sequence of events, threats, insecurities and political manipulation, or the play of institutional, economic or political interests (the 'military-industrial complex'). Such factors are important to be sure, and should not be discounted, but they flow over a deeper **bedrock of modern reason** that has not only come to form a powerful structure of common sense but **the apparently solid ground of the real itself**. In this light, the two 'existential' and 'rationalist' discourses of war-making and justification mobilised in the Lebanon war are more than merely arguments, rhetorics or even discourses. Certainly **they mobilise forms of knowledge and power together; providing political leaderships, media, citizens, bureaucracies and military forces with organising systems of belief, action, analysis and rationale**. But they run deeper than that. They are truth-systems of the most powerful and fundamental kind that we have in modernity: **ontologies, statements about truth and being which claim a rarefied privilege to state what is and how it must be maintained** as it is.

I am thinking of ontology in both its senses: ontology as both a statement about the nature and ideality of being (in this case political being, that of the nation-state), and as a statement of epistemological truth and certainty, of methods and processes of arriving at certainty (in this case, the development and application of strategic knowledge for the use **of armed force**, and the creation and maintenance of geopolitical order, security and national survival). These derive from the classical idea of ontology as a speculative or positivistic inquiry into the fundamental nature of truth, of being, or of some phenomenon; the desire for a solid metaphysical account of things inaugurated by Aristotle, an account of 'being qua being and its essential attributes'.17 In contrast, drawing on Foucauldian theorising about truth and power, I see ontology as a particularly powerful claim to truth itself: a claim to the status of an underlying systemic foundation for truth, identity, existence and action; one that is not essential or timeless, but is thoroughly historical and contingent, that is deployed and mobilised in a fraught and conflictual socio-political context of some kind. In short, ontology is the 'politics of truth'18 in its most sweeping and powerful form.

I see such a drive for ontological certainty and completion as particularly problematic for a number of reasons. Firstly, when it takes the form of the existential and rationalist ontologies of war, it amounts to a hard and exclusivist claim: **a drive for ideational** hegemony and closure that limits debate and questioning, **that confines it within the boundaries of a particular, closed system of logic, one that is grounded in the truth of being**, in the truth of truth as such. The second is its intimate relation with violence: the dual ontologies represent a simultaneously social and conceptual structure that generates violence. Here **we are witness to an epistemology of violence (strategy) joined to an ontology of violence (the national security state)**. When we consider their relation to war, the two ontologies are especially dangerous because each alone (and doubly in combination) tends both to **quicken the resort to war and to lead to its escalation** either in scale and duration, or in unintended effects. In such a context **violence is not so much a tool that can be picked up and used on occasion**, at limited cost and with limited impact -- **it permeates being.**

This essay describes firstly the ontology of the national security state (by way of the political philosophy of Thomas Hobbes, Carl Schmitt and G. W. F. Hegel) and secondly the rationalist ontology of strategy (by way of the geopolitical thought of Henry Kissinger), showing how they crystallise into a mutually reinforcing system of support and justification, especially in the thought of Clausewitz. This creates both a profound ethical and pragmatic problem. The ethical problem arises because of their militaristic force -- they embody and reinforce a norm of war -- and because they enact what Martin Heidegger calls an 'enframing' image of technology and being in which **humans are merely utilitarian instruments** for use, control and destruction, and force -- in the words of one famous Cold War strategist -- can be thought of as a 'power to hurt'.19 The pragmatic problem arises because force so often produces neither the linear system of effects imagined in strategic theory nor anything we could meaningfully call security, but rather **turns in upon itself in a nihilistic spiral of pain and destruction**. In the era of a 'war on terror' dominantly conceived in Schmittian and Clausewitzian terms,20 the arguments of Hannah Arendt (that violence collapses ends into means) and Emmanuel Levinas (that 'every war employs arms that turn against those that wield them') take on added significance. Neither, however, explored what occurs when war and being are made to coincide, other than Levinas' intriguing comment that in war persons 'play roles in which they no longer recognises themselves, making them betray not only commitments but their own substance'. 21

#### The alt is to engage in meditative reflection and ask the question of Being

Swazo 2 Norman is a Professor of Philosophy at the University of Alaska. “Crisis Theory and World Order: Heideggerian Reflections,” p. 12-14

In line with the above thought, I have noted that world order scholars are genuinely concerned about the manifold dimensions of planetary crisis­: war, both conventional war and the post-Cold War threat of thermonuclear war; social and economic injustice, especially between the industrialized North and the developing South of the globe; conditions of extreme poverty, especially in Africa, the subcontinent of Asia, and Latin America; and esca­lating ecological decay across the face of the planet. I submit that this "prag­matic" concern is really a manifestation of an existential anxiety in the face of a prospect of death through global catastrophe issuing from one or a combi­nation of these global problems. Such anxiety in the face of death is fully con­sonant with Heidegger's concern for the human way to be during the global reign of technology, that way in which modernity in its extreme configura­tion determines human life for better and for worse. With this in mind, it is not sufficient merely to contrapose the logic of world order to the logic of statecraft in the manner of straightforward nor­mative disputation. It is necessary, rather, that this existential anxiety be experienced in an essential way; i.e., such that all ethical and political logic and thinking come into question, and such that we come to see that even the logic of world order can have hidden prejudices that must be put into ques­tion. This "putting into question" is not a nihilistic move, such that we would come away from this questioning justifying anything or nothing at all. Rather, the fragility of our inherited and then transmitted justifications within the Western valuation comes into clear relief against the background of the human way to be that Heidegger seeks to clarify. We must remember, after all, as Charles Scott observes, that ... anything has been justified in our history by appeal to universal values and meanings, including the most severe repressions, torture, violent cru­elty, war, and the morbid enslaving and destructive segregation of vast groups of people. The proliferation of `universal' norms whereby we justify certain values and contend against other values mirrors our fear of what the world would be like if we lacked an adequate basis for justifying our values and realizing the best possibilities of ourselves.... The tension in Heidegger's thought ... puts in question the combina­tion of axioms, authorizing disclosure and judgment, as well as the belief that with a proper normative basis for our values we can hope to overcome the destructive proliferation of violently opposing ways of life."

# Coal DA

#### U.S. coal exports to China are low, but downward pressure on domestic demand expands them massively

Bryan Walsh 12, Senior Editor at TIME, May 31, 2012, “Drawing Battle Lines Over American Coal Exports to Asia,” online: http://science.time.com/2012/05/31/drawing-battle-lines-over-american-coal-exports-to-asia/

But across the Pacific Ocean, the demand for coal has never been hotter, with China burning 4.1 billion tons in 2010 alone, far more than any other country in the world. That insatiable demand forced China in 2009 to become a net coal importer for the first time, in part because congested rail infrastructure raised the cost of transporting coal from the mines of the country’s northwest to its booming southern cities. In April, Chinese coal imports nearly doubled from a year earlier. Right now Australia and Indonesia supply much of China’s foreign coal. U.S. coal from the Powder River Basin could be a perfect addition to the Chinese market. Montana and Wyoming are just short train trips to ports on the Pacific Northwest coast, and from there it’s a container ship away from Asian megacities where coal doesn’t have to compete with cheap natural gas and air-pollution regulations are far weaker than in the U.S. To a wounded Big Coal, China is a potential savior.¶ As I write in the new edition of TIME, there’s just one problem: right now, ports on the West Coast lack the infrastructure needed to transfer coal from railcars into container ships. (Just 7 million of the 107 million tons of U.S.-exported coal left the country via Pacific Ocean ports last year.) That’s why coal companies like Peabody and Ambre Energy are ready to spend millions to build coal-export facilities at a handful of ports in Washington and Oregon. If all those plans go forward, as much as 150 million tons of coal could be exported from the Northwest annually—-nearly all of it coming from the Powder -River -Basin and headed to Asia. Even if the U.S. kept burning less and less coal at home, it would have a reason to keep mining it.

#### SMRs cause coal plant retiring

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

SMRs have potential advantages over larger plants because they provide owners more flexibility in financing, siting, sizing, and end-use applications. SMRs can reduce an owner's initial capital outlay or investment because of the lower plant capital cost. Modular components and factory fabrication can reduce construction costs and schedule duration. Additional modules can be added incrementally as demand for power increases. SMRs can provide power for applications where large plants are not needed or may not have the necessary infrastructure to support a large unit such as smaller electrical markets, isolated areas, smaller grids, or restricted water or acreage sites. Several domestic utilities have expressed considerable interest in SMRs as potential replacements for aging fossil plants to increase their fraction of non-carbon-emitting generators. Approximately 80 percent of the 1174 total operating U.S. coal plants have power outputs of less than 500 MWe; 100 percent of coal plants that are more than 50 years old have capacities below 500 MWe [3]. SMRs would be a viable replacement option for these plants.

#### U.S. exports lock in expanded Chinese coal capacity---causes warming over the tipping point---it’s unique because absent U.S. exports the rising cost of coal will cause a shift to renewables

Thomas M. Power 12, Research Professor and Professor Emeritus, Department of Economics, University of Montana; Principal, Power Consulting; February 2012, “The Greenhouse Gas Impact of Exporting Coal from the West Coast: An Economic Analysis,” <http://www.sightline.org/wp-content/uploads/downloads/2012/02/Coal-Power-White-Paper.pdf>

The cumulative impact of these coal port proposals on coal consumption in Asia could be much larger than even that implied by the two pending proposals. If Arch, Peabody, and other western U.S. coal producers’ projections of the competitiveness of western coal in Asia are correct, facilitating the opening of the development of West Coast coal ports could have a very large impact on the supply of coal to China and the rest of Asia.

6.4 The Long-term Implications of Fueling Additional Coal-Fired Electric Generation

Although the economic life of coal-fired generators is often given as 30 or 35 years, a permitted, operating, electric generator is kept on line a lot longer than that, as long as 50 or more years through ongoing renovations and upgrades. Because of that long operating life, the impact of the lower Asian coal prices and costs triggered by PRB coal competing with other coal sources cannot be measured by the number of tons of coal exported each year. Those lower coal costs will lead to commitments to more coal being burned for a half-century going forward.

That time-frame is very important. During exactly this time frame, the next half-century, the nations of the world will have to get their greenhouse gas emission stabilized and then reduced or the concentrations of greenhouse gases in the atmosphere may pass a point that will make it very difficult to avoid massive, ongoing, negative climate impacts. Taking actions now that encourage fifty-years of more coal consumption around the world is not a minor matter. Put more positively, allowing coal prices to rise (and more closely approximate their full cost, including “external” costs) will encourage extensive investments in improving the efficiency with which coal is used and the shift to cleaner sources of energy. This will lead to long-term reductions in greenhouse gas emissions that will also last well into the next half-century. 57

#### Chinese pollution causes CCP collapse and lashout

Yee & Storey 2 - Herbert Yee, Professor of Politics and International Relations at the Hong Kong Baptist University; and Ian Storey, Lecturer in Defence Studies at Deakin University, 2002, The China Threat: Perceptions, Myths and Reality, p. 5

The fourth factor contributing to the perception of a China threat is the fear of political and economic collapse in the PRC, resulting in territorial fragmentation, civil war and waves of refugees pouring into neighbouring countries. Naturally, any or all of these scenarios would have a profoundly negative impact on regional stability. Today the Chinese leadership faces a raft of internal problems, including the increasing political demands of its citizens, a growing population, a shortage of natural resources and a deterioration in the natural environment caused by rapid industrialisation and pollution. These problems are putting a strain on the central government's ability to govern effectively. Political disintegration or a Chinese civil war might result in millions of Chinese refugees seeking asylum in neighbouring countries. Such an unprecedented exodus of refugees from a collapsed PRC would no doubt put a severe strain on the limited resources of China's neighbours. A fragmented China could also result in another nightmare scenario - nuclear weapons falling into the hands of irresponsible local provincial leaders or warlords.2 From this perspective, a disintegrating China would also pose a threat to its neighbours and the world.

#### Chinese lashout goes nuclear

The Epoch Times, Renxing San, 8/4/2004, 8/4, http://english.epochtimes.com/news/5-8-4/30931.html

Since the Party’s life is “above all else,” it would not be surprising if the CCP resorts to the use of biological, chemical, and nuclear weapons in its attempt to extend its life. The CCP, which disregards human life, would not hesitate to kill two hundred million Americans, along with seven or eight hundred million Chinese, to achieve its ends. These speeches let the public see the CCP for what it really is. With evil filling its every cell the CCP intends to wage a war against humankind in its desperate attempt to cling to life. That is the main theme of the speeches. This theme is murderous and utterly evil. In China we have seen beggars who coerced people to give them money by threatening to stab themselves with knives or pierce their throats with long nails. But we have never, until now, seen such a gangster who would use biological, chemical, and nuclear weapons to threaten the world, that all will die together with him. This bloody confession has confirmed the CCP’s nature: that of a monstrous murderer who has killed 80 million Chinese people and who now plans to hold one billion people hostage and gamble with their lives.

# Px

#### Debt ceiling passing but PC’s key---the impact is economic collapse

Klein 1/2 Ezra is a politics writer for the Washington Post. “The lessons of the fiscal cliff,” 2013, <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/01/02/the-lessons-of-the-fiscal-cliff/?wprss=rss_ezra-klein>

There is a narrative in American politics that goes something like this: The White House can’t negotiate. House Republicans can’t be reasoned with. And so the country is caught between pragmatists who can’t hold their ground and radicals who can’t compromise.¶ **The last few days complicate those narratives.** The White House didn’t hold firm on their promise to let the Bush tax cuts expire for all income over $250,000. They agreed to a $450,000 threshold instead. But at the same time, they pocketed more than $600 billion in revenue, $30 billion in extended unemployment benefits and five years of stimulus tax credits without giving up any real spending cuts. ¶ Speaker John Boehner, negotiating on behalf of House Republicans, rejected the White House’s offers for a bigger deal that included big spending cuts and watched his “plan B” die on the House floor. But, with the support of many of his members, he ended up shepherding the McConnell-Biden package towards final passage. Republicans realized they couldn’t be blamed for pushing the country over the cliff. ¶ The question of who “won” the fiscal cliff won’t be answered till we know what happens when Congress reaches the debt ceiling. The White House says that there’ll be no negotiations over the debt ceiling, and that if Republicans want further spending cuts, their only chance is to hand over more tax revenue. If they’re right and they do manage to enforce a 1:1 ratio of tax hikes to spending cuts in the next deal, they’re going to look like geniuses.¶ Republicans swear they are crazy enough to push the country into default, and they promise that the White House isn’t strong enough to stand by and let it happen. If they’re right, and the White House agrees to big spending cuts absent significant tax increases in order to avert default, then Republicans will have held taxes far lower than anyone thought possible.¶ But both Republicans and Democrats can’t be right. If we take the lessons of this negotiation, here’s what will happen: The White House will negotiate **over the debt ceiling**. They’ll say they’re not negotiating over the debt ceiling, and in the end, they may well refuse to be held hostage over the debt ceiling, but the debt ceiling will be part of the pressure Republicans use to force the next deal. The White House fears default, and in the end, they always negotiate.¶ That said, the Republicans aren’t quite as crazy as they’d like the Democrats to believe. They were scared to take the country over the fiscal cliff. They’re going to be terrified to force the country into default, as the economic consequences would be calamitous. They know they need to offer the White House a deal that the White House can actually take — or at least a deal that, if the White House doesn’t take it, doesn’t lead to Republicans shouldering the blame for crashing the global economy. That deal will have to include taxes, though the tax increases could come through reform rather than higher rates.¶ The Republicans also have a problem the White House doesn’t: The public broadly believes they’re less reasonable and willing to negotiate than the Democrats are. The White House has a reputation for, if anything, being too quick to fold. They have more room to avoid blame for a default than the Republicans do. In the end, **if the White House** holds its ground, **Republicans will likely compromise** — though only after the White House has done quite a bit of compromising, too. ¶ The final moments of the fiscal cliff offered evidence that both sides see how this is going to go. In his remarks tonight, President Obama signaled he would hold firm on the debt ceiling. “While I will negotiate over many things, I will not have another debate with this Congress over whether or not they should pay the bills they’ve already racked up through the laws they have passed,” he said. And Boehner signaled that he knows tax reform will have to be part of the next deal. The post-deal press release his office sent out had the headline, “2013 Must Be About Cutting Spending and Reforming the Tax Code.” That said, the final days of the fiscal cliff, in which the deal almost broke apart a half-dozen times for a hal-dozen reasons, is a reminder that these tense, deadline negotiations can easily go awry. And so there’s a third possibility, too: That the White House is wrong about the Republicans will compromise, that the Republicans are wrong that the White House will fold, and so we really will breach the debt ceiling, unleashing economic havoc.

#### Plan’s massively unpopular---drains capital

Annie Snider 12, E&E reporter, 1/16/12, “Pentagon still can't define 'energy security,' much less achieve it,” http://www.eenews.net/public/Greenwire/2012/01/16/1

But this is not a good time to be requesting money at the Pentagon.

Military budget planners have spent the past year carving nearly a half-trillion dollars in budget cuts, while top brass have worn out the thesaurus' list of synonyms for "decimate" as they decry the damage that additional looming cuts would do to their forces and weapons.

At the same time, no one has yet made the business case for investing in energy security. Current rules require that renewable energy and efficiency projects prove they will bring savings over the long run, even if they carry an added security benefit. In fact, because the Pentagon operates on a five-year budget cycle, projects that pencil out to great investments over the long term often get turned down because they register to the budget as a near-term loss.

Microgrids are still in the pilot phase and the military has not yet decided what the business model will be for them. Because the technology would help energy managers use power more efficiently on a day-to-day basis, for instance by bringing unnecessary loads offline during peak demand times, some officials say microgrids may be able to create enough savings to pay for themselves. Not all of industry is convinced, though, and a group of business executives will be suggesting financial models to Robyn's office in a report this spring.

Ultimately, many say the military is going to have to decide what "secure energy" is worth to it if it wants to fix its vulnerabilities.

"Until someone establishes the value of energy security, I only have the business case to rely on, because right now the value of energy security is apparently zero," said Dan Nolan, a retired Army colonel who writes a defense energy blog.

The Navy has made a rough attempt to do this for its Surface Warfare Center in Dahlgren, Va. Like many military installations, the base sits at the end of the power line. Last year it lost electricity 11 times.

Capt. Kenneth Branch, the commander for Naval Facilities Engineering Command Washington, estimates that the two days the center was without power during Hurricane Irene this summer cost it $60,000.

"That's just lost industrial productivity," he said, noting that the numbers helped him justify infrastructure investments. "I also spend a lot of money on my labor trying to figure what were the problems and get back up and online."

A fuller accounting could also count the costs associated with backup generators, including labor required for maintenance, the price of buying and transporting fuel, and the risk of failure.

Pentagon officials say they are beginning to think through some of these calculations, but nobody is sure yet whether extra money would follow.

"If the military is really serious about this, are we going to have to spend some dedicated funds on energy security?" the Army's Kidd said. "I don't know the answer to that, but I think those are the questions we need to start to ask."

Looking to Congress

Ultimately, the answers to those questions will come from Capitol Hill, where lawmakers have been bitterly divided on energy policy.

Indeed, a military energy issue that has become a symbol of the larger energy policy debate was one of the final points to be resolved in last month's congressional budget deal. Republicans mounted an effort to exempt the military from a 2007 ban on purchasing fuels like liquefied coal that have a higher greenhouse gas content than traditional petroleum, but in the end they acquiesced, leaving the ban intact.

#### Global economic crisis causes nuclear war

Cesare Merlini 11, nonresident senior fellow at the Center on the United States and Europe and chairman of the Board of Trustees of the Italian Institute for International Affairs, May 2011, “A Post-Secular World?”, Survival, Vol. 53, No. 2

Two neatly opposed scenarios for the future of the world order illustrate the range of possibilities, albeit at the risk of oversimplification. The first scenario entails the premature crumbling of the post-Westphalian system. One or more of the acute tensions apparent today evolves into an open and traditional conflict between states, perhaps even involving the use of nuclear weapons. The crisis might be triggered by a collapse of the global economic and financial system, the vulnerability of which we have just experienced, and the prospect of a second Great Depression, with consequences for **peace and democracy** similar to those of the first. Whatever the trigger, the **unlimited exercise of national sovereignty,** exclusive **self-interest** and rejection of outside interference would self-interest and rejection of outside interference would likely be amplified, **empty**ing, perhaps entirely, the half-full glass of **multilateralism**, including the UN and the European Union. Many of the more likely conflicts, such as between Israel and Iran or India and Pakistan, have potential religious dimensions. Short of war, tensions such as those related to immigration might become unbearable. Familiar issues of creed and identity could be exacerbated. One way or another, the secular rational approach would be sidestepped by a return to theocratic absolutes, competing or converging with secular absolutes such as **unbridled nationalism.**

# REC PIC

#### The United States Federal Government should offer procurement contracts funded through up-front appropriations for small modular nuclear reactors to be owned by the Department of Defense, and located on military bases in the United States that lack power purchase agreements for electricity generated by utility-owned small modular nuclear reactors.

#### The United States Federal Government should facilitate joint operation and management of DOD-owned small modular reactors by DOD and the Department of Energy, and should remove limitations on per-project allocations of operation and maintenance funding for bases with DOD-owned small modular reactors.

#### Solves the case---DOD procurement contracts accelerate SMR commercialization---spills over to widespread adoption

CSPO 10 – Consortium for Science, Policy and Outcomes, Arizona State University, June 2010, “FOUR POLICY PRINCIPLES FOR ENERGY INNOVATION & CLIMATE CHANGE: A SYNTHESIS,” http://www.catf.us/resources/publications/files/Synthesis.pdf

Government purchase of new technologies is a powerful way to accelerate innovation through increased demand (Principle 3a). We explore how this principle can be applied by considering how the DoD could purchase new nuclear reactor designs to meet electric power needs for DoD bases and operations.

Small modular nuclear power reactors (SMRs), which generate less than 300 MW of power (as compared to more typical reactors built in the 1000 MW range) are often listed as a potentially transformative energy technology. While typical traditional large-scale nuclear power plants can cost five to eight billion dollars, smaller nuclear reactors could be developed at smaller scale, thus not presenting a “bet the company” financial risk. SMRs could potentially be mass manufactured as standardized modules and then delivered to sites, which could significantly reduce costs per unit of installed capacity as compared to today’s large scale conventional reactor designs.   
It is likely that some advanced reactors designs – including molten salt reactors and reactors utilizing thorium fuels – could be developed as SMRs. Each of these designs offers some combination of inherently safe operation, very little nuclear proliferation risk, relatively small nuclear waste management needs, very abundant domestic fuel resources, and high power densities – all of which are desirable attributes for significant expansion of nuclear energy.

Currently, several corporations have been developing small nuclear reactors. Table 2 lists several of these companies and their reactor power capacities, as well as an indication of the other types of reactor innovations that are being incorporated into the designs. Some of these technologies depend on the well-established light water reactor, while others use higher energy neutrons, coolants capable of higher temperature operation, and other innovative approaches. Some of these companies, such as NuScale, intend to be able to connect as many as 24 different nuclear modules together to form one larger nuclear power plant. In addition to the different power ranges described in Table 2, these reactors vary greatly in size, some being only 3 to 6 feet on each side, while the NuScale reactor is 60 feet long and 14 feet in diameter. Further, many of these reactors produce significant amounts of hightemperature heat, which can be harnessed for process heating, gas turbine generators, and other operations.

One major obstacle is to rapid commercialization and development are prolonged multi-year licensing times with the Nuclear Regulatory Commission. Currently, the NRC will not consider a reactor for licensing unless there is a power utility already prepared to purchase the device. Recent Senate legislation introduced by Senator Jeff Bingaman (D-NM) has pushed for DOE support in bringing down reactor costs and in helping to license and certify two reactor designs with the NRC. Some additional opportunities to facilitate the NRC licensing process for innovative small modular reactors would be to fund NRC to conduct participatory research to get ahead of potential license applications (this might require ~$100million/year) and potentially revise the current requirement that licensing fees cover nearly all NRC licensing review costs.

One option for accelerating SMR development and commercialization, would be for DOD to establish SMR procurement specifications (to include cost) and agree to purchase a sufficient amount of SMR’s to underwrite private sector SMR development. Of note here may be that DARPA recently (3/30/10) issued a “Request for Information (RFI) on Deployable Reactor Technologies for Generating Power and Logistic Fuels” 2 that specifies may features that would be highly desirable in an advanced commercial SMR. While other specifications including coproduction of mobility fuel are different than those of a commercial SMR power reactor, it is likely that a core reactor design meeting the DARPA inquiry specifications would be adaptable to commercial applications. While nuclear reactors purchased and used by DOD are potentially exempt from many NRC licensing requirements 3 , any reactor design resulting from a DOD procurement contract would need to proceed through NRC licensing before it could be commercially offered. Successful use of procured SMR’s for DOD purposes could provide the knowledge and operational experience needed to aid NRC licensing and it might be possible for the SMR contractor to begin licensing at some point in the SMR development process4.

Potential purchase of small modular nuclear reactors would be a powerful but proven way in which government procurement of new energy technologies could encourage innovation. Public procurement of other renewable energy technologies could be similarly important.

#### Net-benefit mechanics:

#### DOD reducing reliance on REC purchases now

FT 12 – Federal Times, 7/22/12, “Agencies buying energy credits to meet mandates,” http://www.federaltimes.com/article/20120722/FACILITIES02/307220006/Agencies-buying-energy-credits-meet-mandates

But some agencies are trying to buck the trend and reduce their reliance on RECs.

The Interior Department said it plans to build more renewable energy projects and purchase fewer RECs.

For example, the National Park Service plans to install solar panels on top of its visitor station at Assateague Island, in Berlin, Md.

“We anticipate a reduced reliance on RECs to meet mandated renewable energy goals,” spokesman Drew Malcomb said.

The Defense Department intends to buy fewer RECs and instead invest money in on-site projects.

“It takes money to buy RECs, and you are not creating any new capacity. You are just spending money to meet a goal,” Dorothy Robyn, deputy undersecretary of Defense for installations and environment, said in an interview.

Robyn is confident DoD will get there without paying for credits. “We are in a position to generate renewable energy on our own installations,” she said.

Pentagon spokeswoman Melinda Morgan said the department does not track how much it spends on credits each year.

In 2011, DoD decided to scale back its purchase of RECs, despite having a goal to obtain 5 percent of its facilities’ energy needs from renewable energy sources. It achieved only 3.1 percent after reducing its purchase of credits from 440,000 to 248,000 megawatt hours, Robyn said.

#### Energy obtained through alternative financing doesn’t count towards mandates that force DOD to increase reliance on renewables---causes renewable energy credit purchases to make up the difference

GAO 9 – Government Accountability Office, December 2009, “Defense Infrastructure: DOD Needs to Take Actions to Address Challenges in Meeting Federal Renewable Energy Goals,” <http://www.gao.gov/new.items/d10104.pdf>

As we explained earlier in this report, DOD expects to rely increasingly on alternative financing approaches to meet the renewable energy goals. For DOD to effectively implement these approaches, the department will require energy management staff who have the relevant expertise for implementing the approaches. However, because we found that the services and their installations’ staff often lack expertise in developing alternative financing approaches, DOD may by limited in its ability both to use these approaches to develop renewable energy projects and to do so in a manner that adequately protects the government’s financial resources committed to these approaches.

According to DOD officials, in most cases, private developers are generally interested in partnering with DOD in order to sell the projects’ unbundled energy or associated renewable energy certificates to a third party. These officials explained that the generally accepted business model for these types of approaches includes a renewable energy resource on or near DOD land that is harnessed by a project financed, built, and operated by thirdparty developer that then sells the unbundled energy to DOD or other customers and typically retains ownership of the project’s renewable energy certificates.48

However, under such approaches, DOD often would neither consume the renewable energy nor retain the renewable energy certificates. When DOD does not consume the renewable energy, a developer would provide some other form of compensation for the use of the renewable resource on DOD land. For example, in the largest renewable energy project on DOD land, DOD does not consume the energy but instead receives financial compensation based on the sale of the project’s energy. If DOD neither consumes the renewable energy nor retains the renewable energy certificates, a serious challenge may be posed to DOD’s ability to meet the renewable energy goals. That occurs because, according to DOE’s guidance on implementation of the 2005 Act and the 2007 Executive Order—guidance designed to preserve the integrity of the renewable energy certificate market—for an agency to count a project’s renewable energy toward these goals, the project must meet two requirements. First, the renewable energy must be produced and used on-site at a federal agency or the renewable energy must be produced by a project owned by a federal agency but installed on private property. Second, the agency must retain or replace the renewable energy certificates associated with the energy produced. In addition, as we discussed earlier, unlike DOE, DOD has not issued guidance that provides a clear explanation of its methodology for calculating progress toward the fiscal year 2025 goal under the 2007 Defense Authorization Act, including DOD’s definition of “consumption” and the treatment of renewable energy certificates in that context.

#### DOD leadership---REC reliance sends a signal of greenwashing

Auden Schendler 7, Vice President of sustainability at Aspen Skiing Company, October 2007, “When Being Green Backfires,” Harvard Business Review, Vol. 85, Issue 10

The danger in buying RECs is that the mainstream press has begun to challenge claims about their environmental value. Articles have appeared in publications including BusinessWeek and the Financial Times pointing out that most RECs don't actually offset emissions, and the skepticism is spreading across the Internet. Indeed, most RECs don't result in the creation of clean electricity, which would have been generated anyway, whether or not an REC was printed. As consumers become increasingly savvy about evaluating companies' environmental claims, businesses that tout REC purchases may expose themselves to charges of greenwashing.

A report released in 2006 by an environmental organization called Clean Air--Cool Planet was among the first to rigorously examine the environmental impact of RECs. The report found that while most RECs don't lead to carbon-emissions reductions, a minority do, by directly helping to finance, say, the construction of a new wind farm. Companies that buy RECs and want to avoid charges of greenwashing should seek out these higher-quality and more costly certificates, whose purchase directly and demonstrably helps reduce carbon emissions.

RECs, supporters argue, create a market mechanism that spurs the development of new wind, solar, and other green-electricity plants. As demand for RECs grows, their prices will rise, encouraging developers to build more renewable power facilities that can generate income through increasingly profitable sales of the certificates. Unfortunately, because there has been such a surplus of cheap RECs--and no easy way to distinguish between high- and low-quality offerings--the market mechanism has remained stalled for the most part. If companies, mindful of their reputations, reject inferior RECs and begin demanding quality ones, that could jump-start the production of renewable electricity and actually reduce carbon emissions. Corporate scrutiny and activism might even foster the development of a badly needed tool that could clean up the entire REC industry in one masterstroke: a third-party gold standard for REC quality.

#### Perception of greenwashing destroys the credibility of DOD leadership on clean energy---credible strategy’s key to global spillover of sustainable tech

Laura Horton 11, J.D., Golden Gate University School of Law, Spring 2011, “COMMENT: FUTURE FORCE SUSTAINABILITY: DEPARTMENT OF DEFENSE AND ENERGY EFFICIENCY IN A CHANGING CLIMATE,” Golden Gate University Environmental Law Journal, 4 Golden Gate U. Envtl. L.J. 303, p. lexis

As the world’s largest consumer of energy, the military has a long way to go if it intends to achieve energy efficiency goals set by the government and the DOD itself. However, not everyone is convinced that the military will follow through, considering its past environmental record. 153 This skepticism is valid in light of the growing impact climate change has had on the planet and the extent to which the military has contributed to GHG emissions. 154 In addition, mistrust of the DOD’s environmental record is warranted, since environmental damage from military activities still exists all over the United States 155

The suspect attitude toward military greening is akin to an attitude held by many concerning corporate “environmentalism” in the form of “greenwashing.” 156 The military is claiming to go “green,” and is indeed making strides in energy efficiency, while simultaneously increasing oil use by 1.5% annually through 2017. 157 Also, efficiency programs are limited to base installations and are not applied to tactical fleets, where much of the DOD’s fuel consumption occurs. 158 Furthermore, little is said in any of the aforementioned reports about the many exemptions the DOD sought from numerous environmental laws over the past eight years. 159 The military is accustomed to approaching environmental protection on its own terms and is giving mixed signals about how important energy efficiency will be in the near future. Consequently, there is a question as to how self-imposed standards such as voluntary compliance with federal energy efficiency standards, from which the DOD is otherwise exempt, will play out. 160 One example of the uncertainty of these programs can be found in a recent article in ClimateWire. 161 According to the article, the aforementioned spray foam insulation program has now been halted in the absence of advocacy for such programs. 162 The difficulty of relocating the foam tents and high disposal costs have led to the demise of spray foam use, and supporters are calling for a mandate to move forward with the project. 163 It is unclear whether the DOD will resume the program at all. The need for advocacy is especially important for the public to understand, because of the potential for new energy technology to transform the civilian marketplace as military technology finds its way into the public domain. 164

The military has begun to take the lead in energy efficiency, drive the civilian sector toward sustainable energy use, and push for “policy change to help make the necessary cultural shifts in how its people think about energy use and the decisions they make in all settings.” 165 The more seriously the military takes energy efficiency, the faster sustainable technology will reach the public. For that reason, progress on these efforts should be monitored and documented for the public to review. A history of military brush-offs of the importance of environmental protection does not lend itself to a campaign of global stewardship. In order to win the confidence of the public, the military must demonstrate a willingness to follow through with the programs it has set in place to lead alternative-energy development in the United States and the world.

#### U.S. leadership on the broader green tech transition solves extinction

Klarevas 9 –Louis Klarevas, Professor for Center for Global Affairs @ New York University, 12/15, “Securing American Primacy While Tackling Climate Change: Toward a National Strategy of Greengemony,” http://www.huffingtonpost.com/louis-klarevas/securing-american-primacy\_b\_393223.html

As national leaders from around the world are gathering in Copenhagen, Denmark, to attend the United Nations Climate Change Conference, the time is ripe to re-assess America's current energy policies - but within the larger framework of how a new approach on the environment will stave off global warming and shore up American primacy. By not addressing climate change more aggressively and creatively, the United States is squandering an opportunity to secure its **global primacy** for the next few generations to come. To do this, though, the U.S. must rely on innovation to help the world escape the coming environmental meltdown. Developing the key technologies that will save the planet from global warming will allow the U.S. to outmaneuver potential great power rivals seeking to replace it as the international system's hegemon. But the greening of American strategy must occur soon. The U.S., however, seems to be stuck in time, unable to move beyond oil-centric geo-politics in any meaningful way. Often, the gridlock is portrayed as a partisan difference, with Republicans resisting action and Democrats pleading for action. This, though, is an unfair characterization as there are numerous proactive Republicans and quite a few reticent Democrats. The real divide is instead one between realists and liberals. Students of realpolitik, which still heavily guides American foreign policy, largely discount environmental issues as they are not seen as advancing national interests in a way that generates relative power advantages vis-à-vis the other major powers in the system: Russia, China, Japan, India, and the European Union. ¶ Liberals, on the other hand, have recognized that global warming might very well become the greatest challenge ever faced by (hu)mankind. As such, their thinking often eschews narrowly defined national interests for the greater global good. This, though, ruffles elected officials whose sworn obligation is, above all, to protect and promote American national interests. What both sides need to understand is that by becoming a lean, mean, green fighting machine, the U.S. can actually bring together liberals and realists to advance a collective interest which benefits every nation, while at the same time, securing America's global primacy well into the future. To do so, the U.S. must re-invent itself as not just your traditional hegemon, but as history's first ever green hegemon. Hegemons are countries that dominate the international system - bailing out other countries in times of global crisis, establishing and maintaining the most important international institutions, and covering the costs that result from free-riding and cheating global obligations. Since 1945, that role has been the purview of the United States. Immediately after World War II, Europe and Asia laid in ruin, the global economy required resuscitation, the countries of the free world needed security guarantees, and the entire system longed for a multilateral forum where global concerns could be addressed. The U.S., emerging the least scathed by the systemic crisis of fascism's rise, stepped up to the challenge and established the postwar (and current) liberal order. But don't let the world "liberal" fool you. While many nations benefited from America's new-found hegemony, the U.S. was driven largely by "realist" selfish national interests. The liberal order first and foremost benefited the U.S. With the U.S. becoming bogged down in places like Afghanistan and Iraq, running a record national debt, and failing to shore up the dollar, the future of American hegemony now seems to be facing a serious contest: potential rivals - acting like sharks smelling blood in the water - wish to challenge the U.S. on a variety of fronts. This has led numerous commentators to forecast the U.S.'s imminent fall from grace. Not all hope is lost however. With the impending systemic crisis of global warming on the horizon, the U.S. again finds itself in a position to address a transnational problem in a way that will benefit both the international community collectively and the U.S. selfishly. The current problem is two-fold. First, the competition for oil is fueling animosities between the major powers. The geopolitics of oil has already emboldened Russia in its 'near abroad' and China in far-off places like Africa and Latin America. As oil is a limited natural resource, a nasty zero-sum contest could be looming on the horizon for the U.S. and its major power rivals - a contest which threatens American primacy and global stability. Second, converting fossil fuels like oil to run national economies is producing irreversible harm in the form of carbon dioxide emissions. So long as the global economy remains oil-dependent, greenhouse gases will continue to rise. Experts are predicting as much as a 60% increase in carbon dioxide emissions in the next twenty-five years. That likely means more devastating water shortages, droughts, forest fires, floods, and storms. In other words, if global competition for access to energy resources does not undermine international security, global warming will. And in either case, oil will be a culprit for the instability. Oil arguably has been the most precious energy resource of the last half-century. But "black gold" is so 20th century. The key resource for this century will be green gold - clean, environmentally-friendly energy like wind, solar, and hydrogen power. Climate change leaves no alternative. And the sooner we realize this, the better off we will be. What Washington must do in order to avoid the traps of petropolitics is to convert the U.S. into the world's first-ever green hegemon. For starters, the federal government must drastically increase investment in energy and environmental research and development (E&E R&D). This will require a serious sacrifice, committing upwards of $40 billion annually to E&E R&D - a far cry from the few billion dollars currently being spent. By promoting a new national project, the U.S. could develop new technologies that will assure it does not drown in a pool of oil. Some solutions are already well known, such as raising fuel standards for automobiles; improving public transportation networks; and expanding nuclear and wind power sources. Others, however, have not progressed much beyond the drawing board: batteries that can store massive amounts of solar (and possibly even wind) power; efficient and cost-effective photovoltaic cells, crop-fuels, and hydrogen-based fuels; and even fusion. Such innovations will not only provide alternatives to oil, they will also give the U.S. an edge in the global competition for hegemony. If the U.S. is able to produce technologies that allow modern, globalized societies to escape the oil trap, those nations will eventually have no choice but to adopt such technologies. And this will give the U.S. a tremendous economic boom, while simultaneously providing it with means of leverage that can be employed to keep potential foes in check. The bottom-line is that the U.S. needs to become green energy dominant as opposed to black energy independent.