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## Advantage One is Air Power

#### The Air Force is facing an energy crisis – it threatens future power projection capabilities

Donley & Schwartz 12 –Michael Donley, Secretary of the Air Force AND\*\*\* Norton Schwartz, USAF General, Jan 31st, 2012, "Energy Horizons: United States Air Force Energy S&T Vision 2011-2026,"

The Air Force faces daunting energy challenges which promise only to **increase in severity given increased global demand** for energy, diminishing global energy supplies, and demands for enhanced environmental stewardship. The Air Force requires access to energy and technologies to efficiently utilize this energy that provide distinct advantages over our adversaries—an assured energy advantage‘—across the air, space, cyberspace, and infrastructure domains. These needs are driven by our national security strategy to reduce reliance on foreign petroleum, federal mandates for efficiency and emission reductions, and the need to simultaneously meet mission requirements. The Air Force spends over $8 billion in aviation fuel each year, which is exacerbated by unpredictable prices and contingencies. Energy independence, however, is not only about saving money, but also about saving lives of energy distributers. Our **adversaries increasingly target energy as a center of gravity.** In 2004, Osama bin Laden ordered his operatives to "focus your operations on oil ... since this will cause the (Americans) to die off." To date over 3000 American soldiers and contractors have been killed or wounded protecting supply convoys in Iraq and Afghanistan (approximately one life per 30 convoys), 80% of which are primarily fuel and water. **An assured energy advantage promises our forces will be more** suitable (**adaptable** to a range of environments), **sustainable** (fiscally, environmentally, and renewably), **and secure** now and in the future.

#### Air power is key to hegemony – it independently prevents US-China war

Dunlap 6 – Maj. General, deputy judge advocate of the Air Force, National War College graduate with over 30 years of Armed Forces Experience, Charles Jr., Armed Forces Journal, “America’s Asymmetric Advantage”, http://www.armedforcesjournal.com/2006/09/2009013

So where does that leave us? If we are smart, we will have a well-equipped high-technology air power capability. Air power is America’s asymmetric advantage and is really the only military capability that can be readily applied across the spectrum of conflict, including, as is especially important these days, potential conflict. Consider the record. It was primarily air power, not land power, that kept the Soviets at bay while the U.S. won the Cold War. And it was not just the bomber force and the missileers; it was the airlifters, as well. There are few strategic victories in the annals of military history more complete and at so low a human cost as that won by American pilots during the Berlin airlift. Armageddon was avoided. And the flexibility and velocity of air power also provides good-news stories in friendly and low-threat areas. For example, huge U.S. transports dropping relief supplies or landing on dirt strips in some area of humanitarian crisis get help to people on a timeline that can make a real difference. Such operations also illustrate, under the glare of the global media, the true American character the world needs to see more often if our strategic goals are to be achieved. Air power also doesn’t have the multi-aspect vulnerabilities that boots on the ground do. It can apply combat power from afar and do so in a way that puts few of our forces at risk. True, occasionally there will be a Francis Gary Powers, and certainly the Vietnam-era POWs — mostly airmen — became pawns for enemy exploitation. Yet, if America maintains its aeronautical superiority, the enemy will not be able to kill 2,200 U.S. aviators and wound another 15,000, as the ragtag Iraqi terrorists have managed to do to our land forces. And, of course, bombs will go awry. Allegations will be made (as they are currently against the Israelis) of targeting civilians and so forth. But the nature of the air weapon is such that an Abu Ghraib or Hadithah simply cannot occur. The relative sterility of air power — which the boots-on-the-ground types oddly find distressing as somehow unmartial — nevertheless provides greater opportunity for the discreet application of force largely under the control of well-educated, commissioned officer combatants. Not a total insurance policy against atrocity, but a far more risk-controlled situation. Most important, however, is the purely military effect. The precision revolution has made it possible for air power to put a bomb within feet of any point on earth. Of course, having the right intelligence to select that point remains a challenge — but no more, and likely much less so, than for the land forces. The technology of surveillance is improving at a faster rate than is the ability to conceal. Modern conveniences, for example, from cell phones to credit cards, all leave signatures that can lead to the demise of the increasing numbers of adversaries unable to resist the siren song of techno-connection. Regardless, eventually any insurgency must reveal itself if it is to assume power, and this inevitably provides the opportunity for air power to pick off individuals or entire capabilities that threaten U.S. interests. The real advantage — for the moment anyway — is that air power can do it with impunity and at little risk to Americans. The advances in American air power technology in recent years make U.S. dominance in the air intimidating like no other aspect of combat power for any nation in history. The result? Saddam Hussein’s pilots buried their airplanes rather than fly them against American warplanes. Indeed, the collapse of the Iraqi armed forces was not, as the BOTGZ would have you believe, mainly because of the brilliance of our ground commanders or, in fact, our ground forces at all. The subsequent insurgency makes it clear that Iraqis are quite willing to take on our ground troops. What really mattered was the sheer hopelessness that air power inflicted on Iraq’s military formations. A quotation in Time magazine by a defeated Republican Guard colonel aptly captures the dispiriting effect of high-tech air attack: “[Iraqi leaders] forgot that we are missing air power. That was a big mistake. U.S. military technology is beyond belief.” It is no surprise that the vaunted Republican Guard, the proud fighting organization that tenaciously fought Iran for years, practically jumped out of their uniforms and scattered at the sound of approaching U.S. aircraft. This same ability to inflict hopelessness was even more starkly demonstrated in Afghanistan. For a millennium, the Afghans have been considered among the toughest fighters in the world. Afghan resistance has turned the countryside into a gigantic military cemetery for legions of foreign invaders. For example, despite deploying thousands of troops, well-equipped Soviet forces found themselves defeated after waging a savage war with practically every weapon at their disposal. So what explains the rapid collapse of the Taliban and al-Qaida in 2001? Modern air power. More specifically, the marriage of precision weapons with precise targeting by tiny numbers of Special Forces troops on the ground. The results were stunning. Putatively invulnerable positions the Taliban had occupied for years literally disappeared in a rain of satellite-directed bombs from B-1s and B-52s flying so high they could be neither seen nor heard. This new, high-tech air power capability completely unhinged the resistance without significant commitment of American boots on the ground. Indeed, the very absence of American troops became a source of discouragement. As one Afghan told the New York Times, “We pray to Allah that we have American soldiers to kill,” adding disconsolately, “These bombs from the sky we cannot fight.” Another equally frustrated Taliban fighter was reported in the London Sunday Telegraph recently as fuming that “American forces refuse to fight us face to face,” while gloomily noting that “[U.S.] air power causes us to take heavy casualties.” In other words, the Taliban and al-Qaida were just as tough as the mujahideen who fought the Russians, and more than willing to confront U.S. ground forces, but were broken by the hopelessness that American-style air power inflicted upon them. MORE THAN BOMBS Today it is more than just bombing with impunity that imposes demoralization; it is reconnoitering with impunity. This is more than just the pervasiveness of Air Force-generated satellites. It also includes hundreds of unmanned aerial vehicles that are probing the landscape in Iraq and Afghanistan. They provide the kind of reliable intelligence that permits the careful application of force so advantageous in insurgency and counterterrorism situations. The insurgents are incapable of determining where or when the U.S. employs surveillance assets and, therefore, are forced to assume they are watched everywhere and always. The mere existence of the ever-present eyes in the sky no doubt inflicts its own kind of stress and friction on enemy forces. In short, what real asymmetrical advantage the U.S. enjoys in countering insurgencies in Iraq and Afghanistan relates to a dimension of air power. Strike, reconnaissance, strategic or tactical lift have all performed phenomenally well. It is no exaggeration to observe that almost every improvement in the military situation in Iraq and Afghanistan is attributable to air power in some form; virtually every setback, and especially the strategically catastrophic allegations of war crimes, is traceable to the land forces. While it will be seldom feasible for America to effectively employ any sort of boots-on-the-ground strategy in current or future counterinsurgency situations, the need may arise to destroy an adversary’s capability to inflict harm on U.S. interests. Although there is no perfect solution to such challenges, especially in low-intensity conflicts, the air weapon is the best option. Ricks’ report in “Fiasco,” for example, that Iraq’s weapons of mass destruction program never recovered from 1998’s Operation Desert Fox and its four days of air attacks is interesting. It would appear that Iraq’s scientific minds readily conceded the pointlessness of attempting to build the necessary infrastructure in an environment totally exposed to U.S. air attack. This illustrates another salient feature of air power: its ability to temper the malevolent tendencies of societies accustomed to the rewards of modernity. Given air power’s ability to strike war-supporting infrastructure, the powerful impulse of economic self-interest complicates the ability of despots to pursue malicious agendas. American air power can rapidly educate cultured and sophisticated societies about the costs of war and the futility of pursuing it. This is much the reason why air power alone delivered victory in Operation Allied Force in Kosovo in 1999, without the need to put a single U.S. soldier at risk on the ground. At the same time, America’s **pre-eminence in air power is** also **the** best hope we have to dissuade China **— or any other** future **peer competitor — from aggression**. There is zero possibility that the U.S. can build land forces of the size that would be of real concern to a China. No number of troops or up-armored Humvees, new radios or advanced sniper rifles worries the Chinese. What dominating air power precludes is the ability to concentrate and project forces, necessary elements to applying combat power in hostile areas. As but one illustration, think China and Taiwan. Saddam might have underestimated air power, but don’t count on the Chinese to make the same mistake. China is a powerful, vast country with an exploding, many-faceted economy with strong scientific capabilities. It will take focused and determined efforts for the U.S. to maintain the air dominance that it currently enjoys over China and that, for the moment, deters them. Miscalculating here will be disastrous because, unlike with any counterinsurgency situation (Iraq included), the very existence of the U.S. is at risk.

#### Hegemony solves multiple scenarios for nuclear war

Barnett 11 – Thomas P.M. Barnett is Former Senior Strategic Researcher and Professor in the Warfare Analysis & Research Department, Center for Naval Warfare Studies, U.S. Naval War College American military geostrategist and Chief Analyst at Wikistrat., worked as the Assistant for Strategic Futures in the Office of Force Transformation in the Department of Defense, March 7th, 2011, “The New Rules: Leadership Fatigue Puts U.S., and Globalization, at Crossroads,” http://www.worldpoliticsreview.com/articles/8099/the-new-rules-leadership-fatigue-puts-u-s-and-globalization-at-crossroads

It is worth first examining the larger picture: We live in a time of arguably **the greatest structural change in the global order yet endured**, with this historical moment's most amazing feature being its relative and absolute lack of mass violence. That is something to consider when Americans contemplate military intervention in Libya, because if we do take the step to prevent larger-scale killing by engaging in some killing of our own, we will not be adding to some fantastically imagined global death count stemming from the ongoing "megalomania" and "evil" of American "empire." We'll be engaging in the same sort of system-administering activity that has marked our stunningly successful stewardship of global order since World War II. Let me be more blunt: As the **guardian of globalization**, the U.S. military has been the greatest force for peace the world has ever known. Had America been removed from the global dynamics that governed the 20th century, the **mass murder never would have ended**. Indeed, it's entirely conceivable there would now be no identifiable human civilization left, once nuclear weapons entered **the killing equation.** But the world did not keep sliding down that **path of perpetual war**. Instead, America stepped up and changed everything by **ushering in our now-**perpetual great-power peace. We introduced the **international liberal trade order known as globalization** and played loyal Leviathan over its spread. What resulted was the collapse of empires, an explosion of **democracy,** the persistent spread of **human rights**, the liberation of women, the doubling of life expectancy, a roughly 10-fold increase in adjusted global GDP and a **profound** and persistent **reduction in** battle deaths from state-based **conflicts**. That is what American "hubris" actually delivered. Please remember that the next time some TV pundit sells you the image of "unbridled" American military power as the cause of global disorder instead of its cure. With self-deprecation bordering on self-loathing, we now imagine a post-American world that is anything but. Just watch who scatters and who steps up as the Facebook revolutions erupt across the Arab world. While we might imagine ourselves the status quo power, we remain the world's most vigorously revisionist force. ¶ As for the sheer "evil" that is our military-industrial complex, again, let's examine what the world looked like before that establishment reared its ugly head. The last great period of global structural change was the first half of the 20th century, a period that saw **a death toll of about 100 million across two world wars**. That comes to an average of 2 million deaths a year in a world of approximately 2 billion souls. Today, with far more comprehensive worldwide reporting, researchers report an average of less than 100,000 battle deaths annually in a world fast approaching 7 billion people. Though admittedly crude, these calculations suggest a 90 percent absolute drop and a 99 percent relative drop in deaths due to war. We are **clearly headed for a world order characterized by multipolarity**, something the American-birthed system was designed to both encourage and accommodate. But given how things turned out the last time we collectively faced such a fluid structure, we would do well to keep U.S. power, in all of its forms, deeply embedded in the geometry to come.

#### Perception of decline causes US lashout – triggers hegemonic wars

Goldstein 7 – Professor of Global Politics and International Relations @ University of Pennsylvania “Power transitions, institutions, and China's rise in East Asia: Theoretical expectations and evidence,” Journal of Strategic Studies, Volume 30, Issue 4 & 5 August 2007, pages 639 – 682

Two closely related, though distinct, theoretical arguments focus explicitly on the consequences for international politics of a shift in power between a dominant state and a rising power. In War and Change in World Politics, Robert Gilpin suggested that peace prevails when a dominant state’s capabilities enable it to ‘govern’ an international order that it has shaped. Over time, however, as economic and technological diffusion proceeds during eras of peace and development, other states are empowered. Moreover, the burdens of international governance drain and distract the reigning hegemon, and challengers eventually emerge who seek to rewrite the rules of governance. As the power advantage of the erstwhile hegemon ebbs, **it may become desperate enough to resort to** the ultima ratio of international politics, **force,** to forestall the increasingly urgent demands of a rising challenger. Or as the power of the challenger rises, it may be tempted to press its case with threats to use force. It is the rise and fall of the great powers that creates the circumstances under which major wars, what Gilpin labels ‘hegemonic wars’, break out.13 Gilpin’s argument logically encourages pessimism about the implications of a rising China. It leads to the expectation that international trade, investment, and technology transfer will result in a steady diffusion of American economic power, benefiting the rapidly developing states of the world, including China. As the US simultaneously scurries to put out the many brushfires that threaten its far-flung global interests (i.e., the classic problem of overextension), it will be unable to devote sufficient resources to maintain or restore its former advantage over emerging competitors like China. While the erosion of the once clear American advantage plays itself out, the US will find it ever more difficult to preserve the order in Asia that it created during its era of preponderance. The expectation is an increase in the likelihood for the use of force – either by a Chinese challenger able to field a stronger military in support of its demands for greater influence over international arrangements in Asia, or by a besieged American hegemon desperate to head off further decline. Among the trends that alarm those who would look at Asia through the lens of Gilpin’s theory are China’s expanding share of world trade and wealth (much of it resulting from the gains made possible by the international economic order a dominant US established); its acquisition of technology in key sectors that have both civilian and military applications (e.g., information, communications, and electronics linked with to forestall, and the challenger becomes increasingly determined to realize the transition to a new international order whose contours it will define. the ‘revolution in military affairs’); and an expanding military burden for the US (as it copes with the challenges of its global war on terrorism and especially its struggle in Iraq) that limits the resources it can devote to preserving its interests in East Asia.14 Although similar to Gilpin’s work insofar as it emphasizes the importance of shifts in the capabilities of a dominant state and a rising challenger, the power-transition theory A. F. K. Organski and Jacek Kugler present in The War Ledger focuses more closely on the allegedly dangerous phenomenon of ‘crossover’– the point at which a dissatisfied challenger is about to overtake the established leading state.15 In such cases, when the power gap narrows, the dominant state becomes increasingly desperate. Though suggesting why a rising China may ultimately present grave dangers for international peace when its capabilities make it a peer competitor of America, Organski and Kugler’s power-transition theory is less clear about the dangers while a potential challenger still lags far behind and faces a difficult struggle to catch up. This clarification is important in thinking about the theory’s relevance to interpreting China’s rise because a broad consensus prevails among analysts that Chinese military capabilities are at a minimum two decades from putting it in a league with the US in Asia.16 Their theory, then, points with alarm to trends in China’s growing wealth and power relative to the United States, but especially looks ahead to what it sees as the period of maximum danger – that time when a dissatisfied China could be in a position to overtake the US on dimensions believed crucial for assessing power. Reports beginning in the mid-1990s that offered extrapolations suggesting China’s growth would give it the world’s largest gross domestic product (GDP aggregate, not per capita) sometime in the first few decades of the twentieth century fed these sorts of concerns about a potentially dangerous challenge to American leadership in Asia.17 The huge gap between Chinese and American military capabilities (especially in terms of technological sophistication) has so far discouraged prediction of comparably disquieting trends on this dimension, but inklings of similar concerns may be reflected in occasionally alarmist reports about purchases of advanced Russian air and naval equipment, as well as concern that Chinese espionage may have undermined the American advantage in nuclear and missile technology, and speculation about the potential military purposes of China’s manned space program.18 Moreover, because a dominant state may react to the prospect of a crossover and believe that it is wiser to embrace the logic of **preventive war** and act early to delay a transition while the task is more manageable, Organski and Kugler’s power-transition theory also provides grounds for concern about the period prior to the possible crossover.19 pg. 647-650

#### **US-China war causes extinction**

Strait Times 2k (Ching Cheong, Senior Journalist with The Strait Times, “No one gains in a war over Taiwan,” June 25th, Lexis)

**THE high-intensity scenario postulates a cross-strait war escalating into a full-scale war between the US and China.** If Washington were to conclude that splitting China would better serve its national interests, then **a full-scale war becomes unavoidable. Conflict on such a scale would embroil other countries far and near and -horror of horrors -raise the possibility of a nuclear war**. Beijing has already told the US and Japan privately that it considers any country providing bases and logistics support to any US forces attacking China as belligerent parties open to its retaliation. In the region, this means South Korea, Japan, the Philippines and, to a lesser extent, Singapore**. If China were to retaliate, east Asia will be set on fire**. And the conflagration may not end there as **opportunistic powers elsewhere may try to overturn the existing world order**. With the US distracted, Russia may seek to redefine Europe's political landscape. The balance of power in the Middle East may be similarly upset by the likes of Iraq. In south Asia, hostilities between India and Pakistan, each armed with its own nuclear arsenal, could enter a new and dangerous phase. Will a full-scale Sino-US war lead to a nuclear war? According to General Matthew Ridgeway, commander of the US Eighth Army which fought against the Chinese in the Korean War, the US had at the time thought of using nuclear weapons against China to save the US from military defeat. In his book The Korean War, a personal account of the military and political aspects of the conflict and its implications on future US foreign policy, Gen Ridgeway said that US was confronted with two choices in Korea -truce or a broadened war, which could have led to the use of nuclear weapons. If the US had to resort to nuclear weaponry to defeat China long before the latter acquired a similar capability**, there is little hope of winning a war against China**, 50 years later**, short of using nuclear weapons**. The US estimates that China possesses about 20 nuclear warheads that can destroy major American cities**. Beijing also seems prepared to** go for the nuclear option. A Chinese military officer disclosed recently that Beijing was considering a review of its "non first use" principle regarding nuclear weapons. Major-General Pan Zhangqiang, president of the military-funded Institute for Strategic Studies, told a gathering at the Woodrow Wilson International Centre for Scholars in Washington that although the government still abided by that principle, there were strong pressures from the military to drop it. He said military leaders considered the use of nuclear weapons mandatory if the country risked dismemberment as a result of foreign intervention. Gen Ridgeway said that should that come to pass, **we would see the** destruction of civilization**.**

#### **Air power is key to US-Asia alliances and an effective Asia pivot**

Lowther 11 – Dr. Adam B. Lowther is a member of the faculty at the U.S Air Force's Air University. November 22nd, 2011, "Why U.S. Needs Airpower Diplomacy," thediplomat.com/2011/11/22/why-u-s-needs-airpower-diplomacy/?all=true

What makes affording a shift to the region particularly difficult is the fact that the Asia-Pacific’s distances make operating in the region much more expensive than operating in the West. By contrast, Europe is a rather compact continent where the distance between Washington, DC, and Berlin is closer to half that of Los Angeles to Beijing. To make matters more challenging, **existing U.S. bases in Japan and Korea, for example, are among the United States’ most expensive—even with significant financial support from the host nation. And to make matters even more difficult, in some cases, local populations no longer support a permanent American presence**.¶ These challenges impose a difficult set of requirements on a new U.S. strategy for the Asia-Pacific. Such a strategy should demonstrate that it relies on U.S. assets best able to overcome the challenges of distance; it must prove cost effective; and it is sensitive to the domestic and strategic position of partner nations. One approach is particularly well suited to overcoming these challenges. ¶ Airpower diplomacy, also known as building partnerships by the U.S. Air Force, offers some distinct advantages over any alternatives. Best thought of as the non-kinetic application of air, space, and cyber power, airpower diplomacy is a form of soft power that’s useful in strengthening existing relationships and developing new ones—while protecting American interests. The U.S. Air Force **has successfully employed airpower diplomacy in one iteration or another for more than six decades**. Its strengths are in three distinct areas. ¶ First, airpower, broadly speaking, is able to overcome the distances that make the Asia-Pacific such a challenging region. As the single largest feature on the earth’s surface, the Pacific Ocean makes it difficult for the United States to respond quickly with men and material to unexpected events in the region. With airpower, there’s no place on earth that the United States can’t reach in less than 24 hours.¶ However, aircraft must land, which is why building partnerships—of mutual interests—with countries in the region is a critical component of airpower diplomacy. For many nations in the Asia-Pacific, walking a careful line between China and the United States is the unenviable position in which they find themselves. As the most advanced air, space, and cyber force in the world, the U.S. Air Force is a desirable partner for many countries. This provides a natural advantage for the United States. However, ensuring that the U.S. doesn’t overplay its hand is important if airpower diplomacy is to succeed. ¶ Second, airpower diplomacy is a cost-effective alternative to the use of force. Since it’s a concept that focuses on the application of soft power, airpower diplomacy is far more than just American aircraft sitting on the ramps of foreign airfields. **It** builds partnerships through economic ties**, training and** support of local forces**,** humanitarian relief**,** joint operations**, and much more.** For example, Fifth Air Force, based at Yokota Air Force Base in Japan, has provided assistance to victims of floods, typhoons, volcanoes, and earthquakes on numerous occasions in recent years. The Indian Ocean earthquake and tsunami (2004), Burma cyclone (2008), Indonesian earthquake (2009), and the Tohoku earthquake and tsunami (2011) are some examples of where airpower diplomacy played a leading role in the United States’ response to natural disasters. In the case of the Indian Ocean and Tohoku earthquakes and tsunamis, a strong American response led to improved relations between the United States and Indonesia in the first case and the United States and Japan in the second. This was airpower diplomacy at work.¶ An often overlooked example of airpower diplomacy is the U.S. Air Force’s Inter-American Air Forces Academy (IAAFA) at Lackland Air Force Base in San Antonio, Texas. There, students from across Latin America attend courses ranging from aircraft maintenance to professional leadership. The school’s broader objective is to **build a community of airmen with the skills to lead capable air forces in their home countries—making cooperation with the United States more likely.**¶ In these and many other instances, **airpower diplomacy acts as a cost-effective way for the United States to build partnerships with nations that share common interests**. And, **by strengthening relationships, the** U**nited** S**tates is less likely to find itself in a costly conflict with what could have been a partner**. ¶ Third, airpower and airpower diplomacy don’t require permanent large footprint bases that are both expensive for the United States and a political irritant for many governments in the region. **With the U.S.** pivoting toward the Asia-Pacific, a growth in the number of American main-operating bases in the region would be expected. Airpower diplomacy, however, focuses on the use of joint operations, short-term deployments, and other temporary measures, enabling the United States to maintain a regional presence—demonstrating commitment—while eliminating concerns of an American occupation.¶ Flexible operations and arrangements also have the added benefit of proving to be less of a stressor in the host nation’s relationship with China, which is becoming increasingly important for every nation in the region. The United States’ attempt to conduct what Secretary of State Clinton calls “forward deployed diplomacy,” a strategy in which American airmen operate with their host nation counterparts at bases owned and operated by the host nation, may prove a far superior option to one resembling Cold War NATO where up to several hundred thousand Americans were stationed in Western Europe. ¶ With its focus on a wide range of soft power tools, airpower diplomacy is well suited to serve a central role in American foreign policy in the Asia-Pacific. Simply put, **no other U.S. military capability provides the speed and flexibility of airpower.¶** As defense and foreign policy officials in the Obama administration refine the president’s regional strategy, they may want to give airpower diplomacy and its mix of diplomatic tools significant consideration. After all, no other approach is as cost effective, culturally sensitive, and responsive to the requirements of a complex and changing region.

#### Effective Asia pivot is key to solve multiple scenario for 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.

#### US-Asia alliances prevent proliferation

Tow 7 – William T. Tow is Professor, Department of International Relations, Research School of Pacific and Asian Studies, the Australian National University. AND\*\*\* Amitav Acharya is Professor of Global Governance, Department of Politics, University of Bristol. December 2007, "Obstinate or obsolete? The US alliance structure in the Asia–Pacific" ips.cap.anu.edu.au/ir/pubs/work\_papers/07-4.pdf

The above observation leads to a third explanation for US bilateral alliance persistence in the region. It may well be that the SFS’s existing architecture constitutes the only asset or mechanism available for the US to use at a time when it desires to support its global postures with a sustained Asia–Pacific presence and role. The 2001 QDR acknowledged this, even prior to the war on terror, by observing that the contemporary geopolitical setting is ‘complex and unpredictable’ and that allied cooperation in the Asia–Pacific is indispensable to **implementing a broader American strategy directed toward cultivating and** maintaining international stability. 57 It is notable that every US bilateral ally in Asia eventually deployed forces to ‘Operation Enduring Freedom’ in Afghanistan and, to various degrees, also contributed troops to the Iraq War. **Among the United States’ 16 designated ‘major non-NATO allies’, Asia–Pacific states constitute nearly half of that category: Australia, Japan, New Zealand, the Philippines, Pakistan, South Korea and Thailand.** Gaining this status allows a state to engage with the US ‘in joint research and development on military systems and to cooperate on matters like **counterterrorism with close security partners’**. 58¶ WMD non-proliferation is another US global security objective in which its Asia–Pacific treaty allies are prominently involved. The US is currently working with Japan and South Korea, for example, in responding to an emerging threat (North Korean nuclear capabilities) by engaging with them and with China, Russia and North Korea in the Six Party Talks. Specific points of disagreement still exist between the US and its South Korean ally on what constitutes the right combination of pressure and inducement that needs to be applied to North Korea. But South Korea has largely closed ranks with the US over North Korea’s reported counterfeiting activities to finance its alleged nuclear weapons program and was scheduled to send observers to the PSI maritime interdiction exercise in April 2006 that involved US, Japanese and Australian units practicing interception of WMD contraband on the high seas—an activity North Korea perceives as directly aimed against itself. 59

#### Asian proliferation causes nuclear war – asymmetries make use highly likely

Lyon 9 (December, Program Director, Strategy and International, with Australian Strategic Policy Institute, previously a Senior Lecturer in International Relations at the University of Queensland, “A delicate issue, Asia’s nuclear future”)

Deterrence relationships in Asia won’t look like East–West deterrence. They won’t be relationships of mutual assured destruction (MAD), and there will be many asymmetries among them. Regional nuclear-weapon states will articulate a spectrum of strategies ranging from existential deterrence to minimum deterrence to assured retaliation; and sometimes doctrinal statements will outrun capabilities. The smaller arsenals of Asia and the absence of severe confrontations will help to keep doctrines at the level of generalised deterrence. Extended nuclear deterrence will continue to be important to US allies in East Asia, although it is hard to imagine other Asian nuclear weapon states ‘extending’ deterrence to their clients or allies. Alagappa’s propositions contain a ‘picture’ of what a more proliferated Asia might look like. It could well remain a region where deterrence dominates, and where arsenals are typically constrained: an Asia, in fact, that falls some way short of a ‘nuclear chaos’ model of unrestrained proliferation and mushrooming nuclear dangers. An order in flux? Notwithstanding Alagappa’s more reassuring view, we shouldn’t understate the extent of the looming change from a nuclear relationship based on bipolar symmetry to a set of relationships based on multiplayer asymmetries. As one observer has noted, when you add to that change the relatively constrained size of nuclear arsenals in Asia, the likelihood of further nuclear reductions by the US and Russia, and ballistic missile defences of uncertain effectiveness, the world is about to enter uncharted territory (Ford 2009:125). Some factors certainly act as stabilising influences on the current nuclear order, not least that nuclear weapons (here as elsewhere) typically induce caution, that the regional great powers tend to get along reasonably well with each other and that the region enters its era of nuclear pre-eminence inheriting a strong set of robust norms and regimes from the earlier nuclear era. But other factors imply a period of looming change: geopolitical dynamism is rearranging strategic relationships; the number of risk-tolerant adversaries seems to be increasing; most nuclear weapons states are modernising their arsenals; the American arsenal is ageing; and the US’s position of primacy is increasingly contested in Asia. Indeed, it may be that dynamism which could most seriously undermine the Solingen model of East Asian nonproliferation. Solingen, after all, has not attempted to produce a general theory about proliferation; she has attempted to explain only proliferation in the post-NPT age (see Solingen 2007:3), when the P-5 of the UN Security Council already had nuclear weapons. In essence, though, it’s exactly that broader geopolitical order that might be shifting. It isn’t yet clear how the Asian nuclear order will evolve. It’s one of those uncertainties that define Australia’s shifting strategic environment. It’s not too hard to imagine an order that’s more competitive than the one we see now. The ‘managed system of deterrence’ The second approach to thinking about the Asian nuclear order is to attempt to superimpose upon it William Walker’s two key mechanisms of the first nuclear age: the ‘managed system of deterrence’ and the ‘managed system of abstinence’. What might those ‘systems’ look like in Asia? In Walker’s model, the managed system of deterrence included: the deployment of military hardware under increasingly sophisticated command and control; the development of strategic doctrines to ensure mutual vulnerability and restraint; and the establishment of arms control processes through which policy elites engaged in dialogue and negotiated binding agreements. (Walker 2007:436) It isn’t obvious that those core aspects of the ‘managed’ system are all central features of Asian nuclear relationships. Perhaps most importantly, it isn’t obvious that the world even has a good model for how deterrence works in asymmetric relationships. Within the US, there’s been something of a revival of interest in matters nuclear as strategic analysts attempt to reconceptualise how nuclear relationships might work in the future. Recent work on the problems of exercising deterrence across asymmetrical strategic contests, for example, suggests a number of problems: ‘In asymmetric conflict situations, deterrence may not only be unable to prevent violence but may also help foment it’ (Adler 2009:103). Some of the problems arise precisely because weaker players seem increasingly likely to ‘test’ stronger players’ threats—as part of a pattern of conflict that has emerged over recent centuries, in which weaker players have often prevailed against stronger opponents.3 If we were to look at the case study of the India–Pakistan nuclear relationship—which is grounded in an enduring strategic rivalry, and therefore not ‘typical’ of the broader nuclear relationships in Asia—it’s a moot point whether Pakistani behaviour has been much altered by the ‘deterrence’ policies of India. Indeed, the case seems to show that Pakistan doesn’t even accept a long-term condition of strategic asymmetry with India, and that it intends to use its nuclear weapons as an ‘equaliser’ against India’s larger conventional forces by building a nuclear arsenal larger than the Indian arsenal arrayed against it. That would imply, more broadly, that increasing strategic rivalries across Asia could be accompanied by efforts to minimise asymmetrical disadvantages between a much wider range of players. In short, in a more competitive Asian strategic environment, nuclear asymmetries that are tolerable now might well become less tolerable. Furthermore, we need to think about how we might ‘codify’ deterrence in Asia. In the Cold War days, the MAD doctrine tended to be reflected in arms control accords that limited wasteful spending and corralled the competition. As Walker acknowledges, the agreements were important ‘stabilisers’ of the broader nuclear relationship, but to what extent can they be replicated in conditions of asymmetry? It might be possible to codify crisis management procedures, but designing (and verifying) limitations on weapons numbers would seem to be much more difficult when the arsenals are of uneven size, and when the weaker party (perhaps both parties) would probably be relying on secrecy about the numbers and locations of weapons to minimise the vulnerability of their arsenals.

#### The Asia pivot protects the straits of Malacca – it’s key to Asian trade

Kaplan 11 – Robert D. Kaplan 11 is senior fellow at the Center for a New American Security, national correspondent for the Atlantic, and a member of the U.S. Defense Department's Defense Policy Board, September/October 2011, “The South China Sea Is the Future of Conflict,” online: http://www.foreignpolicy.com/articles/2011/08/15/the\_south\_china\_sea\_is\_the\_future\_of\_conflict?print=yes&hidecomments=yes&page=full

The South China Sea joins the Southeast Asian states with the Western Pacific, functioning as the throat of global sea routes. Here is the center of maritime Eurasia, punctuated by the straits of Malacca, Sunda, Lombok, and Makassar. More than halfthe world's annual merchant fleet tonnage passes through these choke points, and a third of all maritime traffic. The oil transported through the Strait of Malacca from the Indian Ocean, en route to East Asia through the South China Sea, is more than six timesthe amount that passes through the Suez Canal and 17 times the amount that transits the Panama Canal. Roughly two-thirds of South Korea's energy supplies, nearly 60 percent of Japan's and Taiwan's energy supplies, and about 80 percent of China's crude-oil imports come through the South China Sea. What's more, the South China Sea has proven oil reserves of 7 billion barrels and an estimated 900 trillion cubic feet of natural gas, a potentially huge bounty.¶ It is not only location and energy reserves that promise to give the South China Sea critical geostrategic importance, but also the coldblooded territorial disputes that have long surrounded these waters. Several disputes concern the Spratly Islands, a mini-archipelago in the South China Sea's southeastern part. Vietnam, Taiwan, and China each claim all or most of the South China Sea, as well as all of the Spratly and Paracel island groups. In particular, Beijing asserts a historical line: It lays claim to the heart of the South China Sea in a grand loop (widely known as the "cow's tongue") from China's Hainan Island at the South China Sea's northern end all the way south 1,200 miles to near Singapore and Malaysia.¶ The result is that all nine states that touch the South China Sea are more or less arrayed against China and therefore dependent on the United States for diplomatic and military support. These conflicting claims are likely to become even more acute as Asia's spiraling energy demands -- energy consumption is expected to double by 2030, with China accounting for half that growth -- make the South China Sea the ever more central guarantor of the region's economic strength. Already, the South China Sea has increasingly become an armed camp, as the claimants build up and modernize their navies, even as the scramble for islands and reefs in recent decades is mostly over. China has so far confiscated 12 geographical features, Taiwan one, Vietnam 25, the Philippines eight, and Malaysia five.

#### Collapse of Asian trade causes US draw-in and global nuclear war

Auslin 9 – Michael Auslin 9, resident scholar at AEI, “Averting Disaster”, The Daily Standard, 2/6, http://www.aei.org/publications/filter.all,pubID.29339/pub\_detail.asp

As they deal with a collapsing world economy, policymakers in Washington and around the globe must not forget that **when a depression strikes, war can follow**. Nowhere is this truer than in Asia, the most heavily armed region on earth and **riven with** ancient hatreds and territorial **rivalries.** Collapsing trade flows can lead to political tension, nationalist outbursts, growing distrust, and ultimately, military miscalculation. The result would be disaster on top of an already dire situation. Asia's political infrastructure may not be strong enough to resist the slide towards confrontation and conflict. No one should think that Asia is on the verge of conflict. But it is also important to remember what has helped keep the peace in this region for so long. Phenomenal growth rates in Japan, South Korea, Hong Kong, Singapore, China and elsewhere since the 1960s have naturally turned national attention inward, to development and stability. This has gradually led to increased political confidence, diplomatic initiatives, and in many nations the move toward more democratic systems. America has directly benefited as well, and not merely from years of lower consumer prices, but also from the general conditions of peace in Asia. Yet policymakers need to remember that even during these decades of growth, moments of economic shock, such as the 1973 Oil Crisis, led to instability and bursts of terrorist activity in Japan, while the uneven pace of growth in China has led to tens of thousands of armed clashes in the poor interior of the country. Now **imagine such instability multiplied region-wide**. The economic collapse Japan is facing, and China's potential slowdown, **dwarfs any previous economic troubles,** including the 1998 Asian Currency Crisis. Newly urbanized workers rioting for jobs or living wages, conflict over natural resources, further saber-rattling from North Korea, all can take on lives of their own. This is the nightmare of governments in the region, and particularly of democracies from newer ones like Thailand and Mongolia to established states like Japan and South Korea. How will overburdened political leaders react to internal unrest? What happens if Chinese shopkeepers in Indonesia are attacked, or a Japanese naval ship collides with a Korean fishing vessel? Quite simply, Asia's political infrastructure may not be strong enough to resist the slide towards confrontation and conflict. This would be a political and humanitarian disaster turning the clock back decades in Asia. It would almost certainly drag America in at some point, as well. First of all, we have **alliance responsibilities** to Japan, South Korea, Australia, and the Philippines should any of them come under armed attack. Failure on our part to live up to those responsibilities could mean the end of America's credibility in Asia. Secondly, peace in Asia has been kept in good measure by the continued U.S. military presence since World War II. There have been terrible localized conflicts, of course, but nothing approaching a systemic conflagration like the 1940s. Today, such a conflict would be far more bloody, and it is unclear if the American military, already stretched too thin by wars in Afghanistan and Iraq, could contain the crisis. Nor is it clear that the American people, worn out from war and economic distress, would be willing to shed even more blood and treasure for lands across the ocean. The result could be a historic changing of the geopolitical map in the world's most populous region. Perhaps China would emerge as the undisputed hegemon. Possibly democracies like Japan and South Korea would link up to oppose any aggressor. India might decide it could move into the vacuum. All of this is guess-work, of course, but it has happened repeatedly throughout history. There is no reason to believe we are immune from the same types of miscalculation and greed that have destroyed international systems in the past.

## Advantage Two is Warming

#### Warming is accelerating and will soon reach tipping points---it’s not too late but absent emissions reductions extinction is inevitable

Nuccitelli 12 – Dana, environmental scientist at a private environmental consulting firm in Sacramento and has a Bachelor's Degree in astrophysics from the University of California at Berkeley, and a Master's Degree in physics from the University of California at Davis, 2012, “Realistically What Might The Future Climate Look Like?”, http://thinkprogress.org/climate/2012/09/01/784931/realistically-what-might-the-future-climate-look-like/

This is Why Reducing Emissions is Critical¶ We’re not yet committed to surpassing 2°C global warming, but as Watson noted, we are quickly running out of time to realistically give ourselves a chance to stay below that ‘danger limit’. However, 2°C is not a do-or-die threshold. Every bit of CO2 emissions we can reduce means that much avoided future warming, which means that much avoided climate change impacts. As Lonnie Thompson noted, the more global warming we manage to mitigate, the less adaption and suffering we will be forced to cope with in the future.¶ Realistically, based on the current political climate (which we will explore in another post next week), limiting global warming to 2°C is probably the best we can do. However, there is a big difference between 2°C and 3°C, between 3°C and 4°C, and anything greater than 4°C can probably accurately be described as catastrophic, since various tipping points are expected to be triggered at this level. Right now, we are on track for the catastrophic consequences (widespread coral mortality, mass extinctions, hundreds of millions of people adversely impacted by droughts, floods, heat waves, etc.). But we’re not stuck on that track just yet, and we need to move ourselves as far off of it as possible by reducing our greenhouse gas emissions as soon and as much as possible.¶ There are of course many people who believe that the planet will not warm as much, or that the impacts of the associated climate change will be as bad as the body of scientific evidence suggests. That is certainly a possiblity, and we very much hope that their optimistic view is correct. However, what we have presented here is the best summary of scientific evidence available, and it paints a very bleak picture if we fail to rapidly reduce our greenhouse gas emissions.¶ If we continue forward on our current path, catastrophe is not just a possible outcome, it is the most probable outcome. And an intelligent risk management approach would involve taking steps to prevent a catastrophic scenario if it were a mere possibility, let alone the most probable outcome. This is especially true since the most important component of the solution – carbon pricing – can be implemented at a relatively low cost, and a far lower cost than trying to adapt to the climate change consequences we have discussed here (Figure 4).¶ Climate contrarians will often mock ‘CAGW’ (catastrophic anthropogenic global warming), but the sad reality is that CAGW is looking more and more likely every day. But it’s critical that we don’t give up, that we keep doing everything we can do to reduce our emissions as much as possible in order to avoid as many catastrophic consequences as possible, for the sake of future generations and all species on Earth. The future climate will probably be much more challenging for life on Earth than today’s, but we still can and must limit the damage.

#### Scientific consensus proves warming is real, anthropogenic, and causes extinction – plan is key to solve

Flournoy 12 –Dan Flournoy, PhD and MA from the University of Texas, Former Dean of the University College at Ohio University, Former Associate Dean at State University of New York and Case Institute of Technology, Project Manager for University/Industry Experiments for the NASA ACTS Satellite, Currently Professor of Telecommunications at Scripps College of Communications @ Ohio University, January 2012, "Solar Power Satellites," Springer Briefs in Space Development

In the Online Journal of Space Communication , Dr. Feng Hsu, a NASA scientist at Goddard Space Flight Center, a research center in the forefront of science of space and Earth, writes, “The **evidence of global warming is alarming**,” noting the potential for a catastrophic planetary climate change is real and troubling (Hsu 2010 ) . Hsu and his NASA colleagues were engaged in monitoring and analyzing climate changes on a global scale, through which they received first-hand scientific information and data relating to global warming issues, including the dynamics of polar ice cap melting. After discussing this research with colleagues who were world experts on the subject, he wrote: I now have no doubt global temperatures are rising, and that global warming is a serious problem confronting all of humanity. No matter whether these trends are due to human interference or to the cosmic cycling of our solar system, there are two basic facts that are crystal clear: (a) there is overwhelming scientific evidence showing **positive correlations between the level of CO2 concentrations** in Earth’s atmosphere **with respect to** the historical **fluctuations of global temperature** changes; and (b) the overwhelming majority of the world’s scientific community is in agreement about the risks of a potential catastrophic global climate change. That is, if we humans continue to ignore this problem and do nothing, if we continue dumping huge quantities of greenhouse gases into Earth’s biosphere, humanity will be at dire risk (Hsu 2010 ) . As a technology risk assessment expert, Hsu says he can show with some confidence that the planet will face more risk doing nothing to curb its fossil-based energy addictions than it will in making a fundamental shift in its energy supply. “This,” he writes, “is because the risks of a catastrophic anthropogenic climate change can be potentially the **extinction of human species**, a risk that is simply too high for us to take any chances” (Hsu 2010 ) . It was this NASA scientist’s conclusion that humankind must now embark on the next era of “sustainable energy consumption and re-supply, the most obvious source of which is the mighty energy resource of our Sun” (Hsu 2010 ) (Fig . 2.1 ).

#### Prefer scientific consensus – warming skeptics are paid off by fuel companies and cherry-pick data

Monbiot 8 – visiting fellowships or professorships at the universities of Oxford (environmental policy), Bristol (philosophy), Keele (politics), Oxford Brookes (planning) and East London (environmental science). He has honorary doctorates from the University of St Andrews and the University of Essex and an Honorary Fellowship from Cardiff University [George, “Big oil's big lie,” June 23, http://www.guardian.co.uk/commentisfree/2008/jun/23/climatechange.carbonemissions]

Of course, it's not a crime, and it's hard to see how, in a free society, it could or should become one. But the culpability of the energy firms the climate scientist James Hansen will indict in his testimony to Congress today is clear. If we fail to stop runaway climate change, it will be largely because of campaigning by oil, coal and electricity companies, and the network of lobbyists, fake experts and thinktanks they have sponsored. The operation sprang directly from Big Tobacco's war against science. It has used the same fake experts, the same public relations companies and the same tactics: as I showed in my book Heat, the campaign against action on climate change was partly launched by the tobacco company Philip Morris. But while the tobacco companies' professional liars were smoked out by a massive class action in the US, the sponsored climate change deniers still have massive influence over public perception. A survey published yesterday by the Observer shows that six out of ten people in Britain agreed that "many scientific experts still question if humans are contributing to climate change." This is an inaccurate perception, which results from Big Energy's lobbying. Almost without exception, the scientists who claim to doubt that manmade climate change is taking place fall into two categories: either they are not qualifiedin the branch of science they are discussing or they have received moneyfrom fossil fuel companies. Of all the self-professed climate "sceptics", I have been able to find only one – Dr John Christy of the University of Alabama – who has relevant qualifications and who does not appear to have received fees from lobby groups or thinktanks sponsored by the energy companies. But even he has had to admit that the figures on which he based his claims were the results of "errors in the … data". The others are the very opposite of sceptics. **Many of them are paid to start with a conclusion – that climate change isn't happening or isn't important – then to find data and arguments to support it**. In most cases, they cherrypick scientific findings; in a few cases, like the fake scientific paper attached to the celebrated Oregon petition, they make them up altogether. But **people who don't understand the difference between a peer-reviewed paper and a pamphlet are taken in**. The energy companies' propaganda campaign is amplified by scientific illiterates in the media, such as Melanie Phillips, Christopher Booker, Nigel Lawson, Alexander Cockburn and the television producer (who made Channel 4's documentary The Great Global Warming Swindle) Martin Durkin. I don't believe that the energy companies should be prosecuted for commissioning the truckload of trash their sponsored experts publish. But their campaign of disinformation must be exposed again and again. Like the tobacco lobbyists, they are not only delaying essential public action; they also create the impression that science is for sale to the highest bidder. The awful truth is that sometimes it is.

#### Warming magnifies all impacts and makes global conflicts inevitable

Ginsborg et al. 12 – Mikkel Funder, Signe Marie Cold-Ravnkilde and Ida Peters Ginsborg - in collaboration with Nanna Callisen Bang, Denmark Institute for International Studies, 2012, "ADDRESSING CLIMATE CHANGE AND CONFLICT IN DEVELOPMENT COOPERATION EXPERIENCES FROM NATURAL RESOURCE MANAGEMENT" www.diis.dk/graphics/Publications/Reports2012/RP2012-04-Addressing-climate-change\_web.jpg.pdf

2.2 Climate change as a conﬂict multiplier¶ Climate change is therefore best seen as a conﬂict multiplier, rather than as a major direct cause of conﬂict in itself. **Climate change may aggravate and extend the scope of existing conﬂicts, or trigger underlying and latent conﬂicts to break out into the open**. ¶ Previous studies have identiﬁed a number of areas in which **climate change may contribute to a worsening of conﬂicts** (Brown & Crawford 2009). These include:¶ • Land and water access. Access and use rights to land are a key feature in most situations where climate change has contributed to natural resource conﬂicts so far. Climate change can **intensify existing conﬂicts over land**, as land becomes less fertile or is ﬂooded, or if existing resource sharing arrangements between diﬀerent users and land use practices are disrupted. **In some parts of Africa, climate change may lead to a decline in available water resources of some 10–20% by the end of the century** (op cit.). This may **intensify existing competition** for access to water at intra-state and/or subnational levels. ¶ • Food security. Reduced rainfall and rising sea levels may lead to a decline in agricultural production and a substantial loss of arable land in some parts of Africa. Reduced yields for own consumption and increasing domestic food prices may in some cases lead to **civil unrest, and competition over access to land may intensify**.¶ • Migration and displacement. In some cases, increased scarcity of and competition over access to water and arable land may contribute to internal or regional migration, and disasters such as ﬂoods may lead to temporary or long-term local displacement. This may in turn **strengthen conﬂicts between host societies/communities and migrants** looking for access to new land and resources. ¶ • Increasing inequality and injustice. Through processes such as the above, some population groups may be particularly hard hit, leading to increased inequality and a sense of injustice. This may **intensify existing grievances and disputes** between natural resource users and/or between resource users and outside actors such as governments – thereby increasing the risk and intensity of conﬂict.

#### CO2 emissions will destroy the ocean - causes extinction

Sify, Citing Professors @ University of Queensland and North Carolina, 10 (Sify News, Citing Ove Hoegh-Gulberg, Professor @ University of Queensland and Director of the Global Change Institute AND Citing John Bruno, Associate Professor of Marine Science @ UNC, “Could unbridled climate changes lead to human extinction?,” June 19th, <http://www.sify.com/news/could-unbridled-climate-changes-lead-to-human-extinction-news-international-kgtrOhdaahc.html>)

Sydney: Scientists have sounded alarm bells about how **growing concentrations of greenhouse gases are driving irreversible and dramatic changes in the** way the **oceans** function, **providing evidence that humankind could well be on the way to** the next great **extinction**. **The findings** of the comprehensive report: 'The impact of climate change on the world's marine ecosystems' **emerged from a synthesis of recent research** on the world's oceans, **carried out by** two of **the world's leading marine scientists.**  One of the authors of the report is Ove Hoegh-Guldberg, professor at The University of Queensland and the director of its Global Change Institute (GCI). '**We may see sudden, unexpected changes that have serious ramifications for** the overall well-being of humans, including **the capacity of the planet to support people**. This is further evidence that **we are well on the way to the next great extinction event**,' says Hoegh-Guldberg. 'The findings have enormous implications for mankind, particularly **if the trend continues**. The earth's ocean, which produces half of the oxygen we breathe and absorbs 30 per cent of human-generated carbon dioxide, is equivalent to its heart and lungs. This study shows worrying signs of ill-health. It's as if the earth has been smoking two packs of cigarettes a day!,' he added. 'We are entering a period in which **the ocean services upon which humanity depends are** undergoing massive change and in some cases **beginning to fail**', he added.

#### Warming causes African instability

Fuerth 8 – Fuerth, Research Professor of International Affairs at George Washington University, former National Security Advisor to VP Al Gore, 2008, Leon, Severe Climate Change over the Next Thirty Years, In Climatic Cataclysm, p. 142

In sub-Saharan Africa, hundreds of millions of already vulnerable persons will be exposed to intensified threat of death by disease, malnutrition, and strife. Natural causes such as long-term drought will play a major role, but political factors either will exacerbate these disasters or may even precipitate them as the result of a mix of mismanagement and miscalculated policy. Such was the case in Ethiopia during the rule of Colonel Mengistu Haile Mariam. The ongoing genocide in Darfur may have begun as a consequence of water scarcity, as noted elsewhere in this report.¶ Under conditions of severe global climate change environmental factors will push already failed states deeper into the abyss, **while driving other states toward the brink**. The stronger regional states, such as South Africa, will be affected not only by internal social and economic stress related to changing climatic patterns but also by southward flows of refugees hoping for rescue and safety.¶ Contemporary Africa aspires to be a unified system but falls far short. Severe climate change would, in a grim way, provide for the first time the missing element of connectivity. **From one end of the African continent to the other**, severe climate change will become the common denominator of turbulence and destruction.

#### Great power nuclear war

Glick 7 Caroline Glick 7, deputy managing editor of The Jerusalem Post, Senior Fellow for Middle East Affairs of the Center for Security Policy, “Condi's African holiday”, December 11, http://www.rightsidenews.com/20071211309/editorial/us-opinion-and-editorial/our-world-condis-african-holiday.html

The Horn of Africa is a dangerous and strategically vital place. Small wars, which rage continuously, can easily escalate into big wars. Local conflicts have regional and global aspects. All of the conflicts in this tinderbox, which controls shipping lanes from the Indian Ocean into the Red Sea, can potentially give rise to regional, and indeed global conflagrations between competing regional actors and global powers.

## Solvency

#### SPS is key to air power – the perception alone solves great power war

Garretson 12 – Lt Col Peter Garretson is an airpower strategist currently serving on the CSAF’s Strategic Studies Group (HAF/CK). His previous assignment was at the Institute for Defence Studies and Analyses in New Delhi as an Air Force Fellow examining Indo–US long-term space collaboration under the sponsorship of the Council on Foreign Relations. Prior to that he was the chief of future science and technology exploration for the HQ USAF Directorate of Strategic Planning (AF/A8XC), Spring 2012, "Solar Power in Space?" Strategic Studies Quarterly Spring, <http://www.au.af.mil/au/ssq/2012/spring/garretson.pdf>

But so far at least, the reaction seems more consistent with the worry expressed by Friedman that the United States, as compared to China, had lost its “can-do” spirit in the early twenty-first century.29 Airmen, as stewards of America’s aerospace power, should not be so complacent. Understanding the critical link between dual-use infrastructure that contributes to access and on-orbit capabilities, an Air Force strategist might then take a much less complacent view of international competition. There are no battles in this strategy; each side is merely trying to outdo in performance the equipment of the other. . . . Its tactics are industrial, technical, and financial. . . . A silent and apparently peaceful war is therefore in progress, but it could well be a war which of itself could be decisive. —General d’Armee Andre Beaufre For years **the Air Force has kept the** United States **out of** a **major war and kept the world from another** global conflict **by maintaining technological preeminence** and overmatch, practicing what a Cold War textbook called a “Strategy of Technology”: The Technological War is the decisive struggle in the Protracted Conflict. Victory in the Technological War **gives supremacy in all other phases of the conflict**. . . . The Technological War creates the resources to be employed in all other parts of the Protracted Conflict. It governs the range of strategies that can be adapted in actual or hot war. . . . Military superiority or even supremacy is not permanent, and never ends the conflict unless it is used. The United States considers the Technological War as an infinite game: one which is not played out to a decisive victory. We are committed to a grand strategy of defense, and will never employ a decisive advantage to end the conflict by destroying our enemies. Consequently, we must maintain not only military superiority but [also] technological supremacy. The race is an alternative to destructive war, not the cause of military conflict. . . . The United States is dedicated to a strategy of stability. We are a stabilizing rather than a disturbing power, and our goal is preserving the status quo and the balance of power rather than seeking conquest and the final solution to the problems of international conflict through occupation or extermination of all opponents. In a word, the U.S. sees the Technological War as an infinite game, one played for the sake of continuing to play, rather than for the sake of “victory” in the narrow sense. 30 That is not to imply that Airmen should recommend a zero-sum orientation toward SBSP competition, only that America should get its head in this game. Because it is the policy of the United States to pursue international cooperation in space and take the lead in multilateral efforts which enhance stability and transparency in space, Airmen must consider not only the threat of losing an important technical competition but also the opportunity international cooperation could provide to advance US interests through partnerships in the domains under their stewardship. Aerospace competition is not only technical; it also has an aspirational moral dimension, as nations are measured, admired, and respected not only by their accomplishments but also by their ambitions. Former USAF strategist Col John Boyd made clear the strategic value of vision: “What is needed is a vision rooted in human nature so noble, so attractive that it not only **attracts the uncommitted and magnifies** the spirit and **strength of** its **adherents, but also undermines** the dedication and **determination of any** competitors and **adversaries.**” 31

#### SPS is the only energy that can solve

**Arkin 12** – Editor, NBC Universal (Daniel, 2/22/12, “Air Force Plans Nuke-Powered Spacecraft, Space-Based Power Stations”, http://www.nbclosangeles.com/news/tech/NATL-Report-US-Air-Force-Plans-Energy-Revolution-139967283.html)

The [USAF] United States Air Force plans to institute revolutionary changes over the next fifteen years designed to meet the energy challenges of the twenty-first century. In a publicly-available official report issued earlier this month, **the USAF unveils a sweeping new paradigm for energy** science and technology. According to an exhaustive summary at Space.com, the report discloses wide-ranging USAF-backed initiatives to boost energy supply, cut back on demand, and fundamentally alter military protocol to suit cutting-edge mission needs. Perhaps most significantly, the report—formally titled "Energy Horizons: United States Air Force Energy S&T Vision 2011-2026"—augurs the development of space-based power stations and the use of spacecraft powered by nuclear reactors on Earth. "Energy is a center of gravity in war and an assured energy advantage can enable victory," Mark Maybury, chief scientist for the USAF, said in remarks appended to the report. Space.com highlights the report's prospective model for a Space Solar Power System (SBSP) that might beam solar power to Earth via laser transmission. This radical conception of energy has been in research since the early 1970s. Major technological advancements in the SBPS method could be completely revolutionary, the report says.

#### Fossil fuel dependence is unsustainable – only SPS-ALPHA solves world energy needs and can be exported globally

Dvorsky 11-28 – George Dvorsky, writer for Io9, a daily science and technology publication, November 28th, 2012, "How space-based solar power will solve all our energy needs" io9.com/5963955/how-space+based-solar-power-will-solve-all-our-energy-needs

Humanity's demand for energy is growing at an astonishing rate. Combine this with an ever-dwindling supply of fossil fuels, and it becomes painfully clear that something innovative and powerful is required. There's one high-tech proposal that holds tremendous promise — an idea that has been around since the late 1960s. Here's how space-based solar power will **eventually** solve all our energy needs.¶ Humans needs more power¶ Assuming that economic progress and globalization continues at its current pace, **we'll need to produce twice the amount of energy that's consumed today by the 2030s — what will reach a monumental 220 trillion kiloWatt hours per year. And by the end of the century, we'll need four times the current rate of consumption.**¶ **Just as importantly, we're also going to have to kick the fossil fuel habit — and not only because** it'll eventually run out**. Rising CO2 emissions are wreaking havoc on the Earth's atmosphere, what's creating environmentally deleterious side-effects at a rate faster than expected.**¶ Moreover, if greenhouse gases are to be brought under control over the course of the next several decades, we'll need to get upwards of 90% of all our energy from either renewable or nuclear sources.¶ While there are a number of proposals on the table for how we might be able to meet these challenges, **none** really **appear to be truly viable**.¶ Except for solar powered satellites.¶ Obvious benefits¶ A closer look at a space-based solution yields a lengthy list of advantages.¶ Solar powered satellites **don't produce any greenhouse gases**, nor do they take up valuable real estate on Earth. Once the initial costs are met, they would be relatively cheap to maintain; the solar modules used for generating solar energy have a long service life, not to mention the astounding ROI that would come from a virtually unlimited energy source.¶ Additionally, they're not constrained by night/day cycles, the weather, or the changing seasons. And indeed, they would be much more efficient than any kind of ground-based station. The collection of solar energy in space is seven times greater per unit area than on the surface of the planet. Moreover, **the amount of solar energy available up there is staggering — on the order of** billions **of times greater than what we draw today; the Earth receives only one part in 2.3 billion of the Sun's output**. The potential for scalability is enormous, to say the least.¶ Solar powered satellites won't be prone to terrorist attacks and they'll **reduce geopolitical pressure for oil.** According to futurist Keith Henson, space-based solar could be used to power vehicles, like electric cars, or by enabling the production of synthetic fuels — which at a penny per kiloWatt hour would result in gasoline that costs one dollar a gallon.¶ At the same time, space-based solar would provide true energy independence for those nations who choose to implement it. And on top of that, the energy could be exported to virtually anywhere in the world; it would be especially valuable for isolated areas of the globe, including Africa and India.¶ Lastly, **space-based solar power would also yield** tremendous benefits to human and robotic space exploration**, including the powering of off-planet colonies on the Moon, Mars, and space stations.** It could also serve as the first seed in the development of a Dyson Sphere — a massive array of solar collectors that would completely envelope the sun at a distance of about 1 AU.¶ How it's going to work¶ Back in the late 1960s, Peter Glaser proposed the idea of solar powered satellites (SPS), what he envisioned as space-based photovoltaics that could transfer energy wirelessly back down to Earth. His design called for a large platform positioned in space in a high Earth orbit that would continuously collect and convert solar energy into electricity. In turn, that power would be used to drive a wireless power transmission (WPT) that beams the solar energy to receiving stations on Earth — what would be comprised of massive receiving dishes.¶ A number of visionaries have updated Glaser's vision to include the use of a microwave wireless power transmitter. This would involve large discrete structures (like a solar array and transmitter) that would have to be assembled in space. SPS systems could also include a modular electric/diode array laser WPT concept, involving self-assembling solar power-laser-thermal modules. Other designs call for an extremely modular microwave WPT SPS "sandwich structure" concept, requiring a significant number of small solar power-microwave-thermal modules that would be robotically assembled on orbit.¶ But to make it happen, we'll need to develop low-cost, environmentally-friendly launch vehicles. Eventually we'll send the materials up in a space elevator, but until then we'll have to come up with something more efficient. Thankfully, SpaceX and other private firms are already working on more efficient launch solutions.¶ Additionally, we'll require large scale construction and operations stations in orbit — space-based workplaces that would be more complex, larger, and more energy-demanding than the ISS. They would allow for the production of large, simple panels, that are easy to assemble and consist of many identical parts. Eventually, it may be possible to construct an entire flotilla of these solar collectors using materials extracted from asteroids.¶ Design proposals¶ As word gets out about the potential for SPS, and as the technology catches up to the idea, a number of design proposals have been put forth; this isn't just idle speculation anymore — it's something that's just about ready for prime-time.¶ For example, there's SPS-ALPHA (Solar Power Satellite via Arbitrarily Large PHased Array) which is being developed by NASA's John Mankins. Using a "biomimetic" approach, the project calls for huge platforms constructed from tens of thousands of small elements that could deliver tens to thousands of megawatts via wireless power transmission.¶ It would do this by using a large array of individually controlled thin-film mirrors outfitted on the curved surface of a satellite. These adjustable mirrors would intercept and redirect incoming sunlight toward photovoltaic cells affixed to the backside of the solar power satellite's large array. The Earth-pointing side of the array would be tiled with a collection of microwave-power transmission panels that generate the coherent, low-intensity beam of radio frequency energy and transmits that energy to Earth.¶ And what's particularly cool about this concept is that **it would enable the construction of a solar-power satellite that can be assembled entirely from individual system elements that weigh no more than 110 to 440 pounds (**50 **to 200** kilograms**), allowing all pieces to be** mass produced at low cost.

#### SPS facilitates a complete transition away from conventional energy

Flournoy 12 – Don Flournoy, PhD and MA from the University of Texas, Former Dean of the University College at Ohio University, Former Associate Dean at State University of New York and Case Institute of Technology, Project Manager for University/Industry Experiments for the NASA ACTS Satellite, Currently Professor of Telecommunications at Scripps College of Communications at Ohio University, "Solar Power Satellites," January, Springer Briefs in Space Development, Book

One of the obvious opportunities for solar power satellites is to become an **on-demand source of electric power for terrestrial utilities.** Once Sunsat providers can demonstrate the capability to direct continuous radio or light frequency power beams to production sites, the owners of coal-fired generation stations will quickly discover the value of this service. The same will also be true of **nuclear, gas-fired, biomass** and other such plants. With electrical power production ratings of 1 gw or more, solar satellite systems can be designed to meet the short- and long-term **needs of the terrestrial power plants at their** existing locations, at first to complement but eventually to replace their current fuel feedstocks. An attractive feature of this approach for space solar power investors is that the utilities have a predictable need for energy in great quantities. Since the power utilities are already connected to an electrical power grid, often covering regions larger than a single state or nation, the Sunsat people won’t have to also be in the terrestrial distribution business. Whether producing power from coal, nuclear, gas, biomass or other sources, **power utilities can be expected to step forward as early users** of this new space asset to begin reducing their mining and transportation costs. The use of scrubbers and filters will be greatly reduced, if needed at all. Problems related to spent fuel disposal and toxic waste management should be fewer. But mainly the utilities will become clients (and possibly investors) in the Sunsat business to guarantee a **sustainable night-and-day fuel source.**

#### SPS overcomes the flaws of other energy sources – terrestrial alternatives fail

Flournoy 12 – Don Flournoy, PhD and MA from the University of Texas, Former Dean of the University College at Ohio University, Former Associate Dean at State University of New York and Case Institute of Technology, Project Manager for University/Industry Experiments for the NASA ACTS Satellite, Currently Professor of Telecommunications at Scripps College of Communications at Ohio University, "Solar Power Satellites," January, Springer Briefs in Space Development, Book

Alternative terrestrial energy is not the complete answer, either. According to Woodcock, the limitation of Earth-based renewable energy sources is that they are not “demand” sources; that is, **they are only intermittently available.** Terrestrial solar power works when the Sun shines. Terrestrial wind power works when the wind blows. Terrestrial hydroelectric power is a way of storing water energy until users demand it. This process can include hydroelectric pumped storage, which is the lifting of water uphill where it is held until released to create electricity as it flows through turbines. But there is little capacity remaining on the planet for hydroelectric installations. Geothermal energy is also way to tap stored energy in the Earth itself. Batteries, water electrolysis and hydrogen storage in fuel cells are other ways to provide storage. But to run a **modern power grid** exclusively (or even largely) on terrestrial renewable energy, he says, would **require enormous amounts of storage**, and **storage is expensive**. Woodcock concludes that [SPS] solar power satellites are a potential solution because they can be positioned in space over a particular location to which they can stream continuous sunlight. Supplying power around the clock, such an energy system can serve as a demand source with very little storage required. He also suggests, given constant solar pointing, the photovoltaic area could probably be reduced by a factor of 10–100 by using concentrators. Land designated for receiving sites might also serve dual or multiple purposes. The National Space Society (NSS) hosts annual conferences that include sessions on space solar power. The organization’s website includes one of the most complete archives on space solar research. It also has taken positions of advocacy, stating that “all viable energy options should be pursued with vigor, [but that] Sun/ Sat power (**SSP) has a number of** substantial advantages over other energy sources.” The NSS lists several of these advantages: • Unlike oil, gas, ethanol and coal, SSP does not emit greenhouse gases. • Unlike nuclear power plants, SSP does not **produce hazardous waste** that needs to be stored and guarded for hundreds of years. • **Unlike terrestrial solar and wind** power plants, **SSP can be available in huge quantities 24-hours-a-day, 7 days a week. It produces regardless of cloud cover, daylight, or wind speed.** • Unlike coal and nuclear fuels, SSP does not require environmentally problematic mining operations. • Unlike nuclear power plants, SSP doesnot **provide** potential **targets for terrorists** (National Space Society 2008 ).

#### The US is key – US action sends a signal that revitalizes international cooperation on warming

Ritter 11-24 – Karl Ritter, reporter for the Huffington Post, November 24th, 2012, "U.N. Climate Talks: Will U.S. Take More Central Role After Bout Of Extreme Weather?" [www.huffingtonpost.com/2012/11/24/un-climate-un-qatar-united-states\_n\_2184357.html?view=print&comm\_ref=false](http://www.huffingtonpost.com/2012/11/24/un-climate-un-qatar-united-states_n_2184357.html?view=print&comm_ref=false)

"I think there will be expectations from countries to hear a new voice from the United States," said Jennifer Morgan, director of the climate and energy program at the World Resources Institute in Washington.¶ The climate officials and environment ministers meeting in the Qatari capital of Doha will not come up with an answer to the global temperature rise that is already melting Arctic sea ice and permafrost, raising and acidifying the seas, and shifting rainfall patterns, which has an impact on floods and droughts.¶ They will focus on side issues, like extending the Kyoto protocol – an expiring emissions pact with a dwindling number of members – and ramping up climate financing for poor nations.¶ **They will also try to structure the talks for a new global climate deal that is supposed to be adopted in 2015, a process in which American leadership is considered crucial**.¶ Many were disappointed that Obama didn't put more emphasis on climate change during his first term. He took some steps to rein in emissions of heat-trapping gases, such as sharply increasing fuel efficiency standards for cars and trucks. But a climate bill that would have capped U.S. emissions stalled in the Senate.¶ "We need the U.S. to engage even more," European Union Climate Commissioner Connie Hedegaard told The Associated Press. "Because that can change the dynamic of the talks."¶ The world tried to move forward without the U.S. after the Bush Administration abandoned the Kyoto Protocol, a 1997 pact limiting greenhouse emissions from industrialized nations. As that agreement expires this year, the climate curves are still pointing in the wrong direction.¶ The concentration of heat-trapping gases like carbon dioxide has jumped 20 percent since 2000, primarily from the burning of fossil fuels like coal and oil, according to a U.N. report released this week. And each year, the gap between what researchers say must be done to reverse this trend, and what's actually being done, gets wider.¶ Bridging that gap, through clean technology and renewable energy, is not just up to the U.S., but to countries like India and China, whose carbon emissions are growing the fastest as their economies expand.¶ But Obama raised hopes of a more robust U.S. role in the talks when he called for a national "conversation" on climate change after winning re-election. The issue had been virtually absent in the presidential campaigning until Hurricane Sandy slammed into the East Coast.¶ **The president still faces domestic political constraints**, and there's little hope of the U.S. increasing its voluntary pledge in the U.N. talks of cutting emissions by 17 percent by 2020, compared to 2005 levels.¶ Still, just a signal that Washington has faith in the international process would go a long way, analysts said.¶ "**The** perception **of many negotiators and countries is that the U.S. is not really interested in increasing action on climate change** in general," said Bill Hare, senior scientist at Climate Analytics, a non-profit organization based in Berlin.

#### US action spreads globally

Kammen 7 – Professor of Public Policy @ UC Berkeley (Daniel, "Green Jobs Created by Global Warming Initiative," September 25th, http://www.unep.org/civil\_society/GCSF9/pdfs/karmen-senate.pdf)

In addition to supporting domestic job creation, clean energy is an important and fastest growing international sector, and one where overseas policy can be used to support poor developing regions – such as Africa (Jacobsen and Kammen, 2007) and Central America – as well as regaining market share in solar, fuel cell and wind technologies, where European nations and Japan have invested heavily and are reaping the benefits of month to year backlogs in clean energy orders. Some of those orders are for U. S. installations, but many more could be if we choose to make clean and green energy a national priority for both domestic installation and overseas export. Technology exports have impacts well beyond domestic job creation. In fact, if properly managed, the development of a thriving ‘cleantech’ sector can address a vital global issues, namely the emissions trajectories of major developing nations. China and India are often singled out for attention as major, emerging global emitters. China, in fact, will become the world’s largest greenhouse emitter in the near future, if it has not already. This fact, is often used – mistakenly in my view – to argue against unilateral climate protection efforts by nations such as the United States.  This view is shortsighted in two vital respects. First, China is demonstrably already suffering from the impacts of fossil fuel use. Crop yields in many parts of China are significantly lower than they would be without the significant sulfur and particulate burden that results from domestic coal combustion. (In fact, coal combustions emissions from China have significant air quality impacts on Japan, and can be measured in the U. S. as well.) Crop losses of over 20% have been reported in part of China, with the decrease unambiguously linked to air pollution. China also experiences significant human health impacts from this pollution burden as well. Second, China has committed, on paper, to a ‘circular economy’ where waste is reduced and overall productivity is enhanced. If the United States were to become a major exporter, or even a partner, in the production of low-emissions technologies – from truly carbon-capture coal-fired power plants, to increased numbers of solar, wind, and biofuel technologies – China would be an eager trading partner, so that they could install increasing numbers of low-emissions technologies. This would directly help the Chinese economy and their environmental and public health situation**.** On both of these grounds, U. S. domestic expansion of the clean energy sector will likely positively impact the ability and the actions of a number of emerging economies to ‘go green’.

#### Creating a prize system catalyzes SPS development and makes it economically viable

Globus 11Al Globus, Chair of the National Space Society's Space Settlement Advocacy Committee, July 2011, “A SPACE SOLAR POWER INDUSTRY FOR $2 BILLION OR YOUR MONEY BACK”

The proposed prize pays out for each kilowatt-hour (kwh – one thousand watts of energy for one hour) of power delivered from space to an operational electrical system on Earth. To receive prize money, power must be sold to a utility or other entity on Earth at near market rates. This insures that the power is delivered in a way that can and will be used, and provides additional income to the contestants. The prize is divided into three levels: $1, $0.7 and $0.3 per kwh. This is to provide continuing incentive to develop SSP at successively lower prices on the way to unsubsidized economic viability. Furthermore: 1. To encourage the development of a competitive industry, at each level the prize money is divided such that at least three satellites are needed to capture all of the funds. No individual satellite can earn more than 60% of the prize money and no two satellites more than 90%, leaving 10% for a third satellite. 2. To encourage development of multiple approaches to SSP, each satellite earning prize money at a single level must be owned and operated by a different entity and must use a substantially different approach to SSP generation. 3. To encourage development of successively more cost-effective systems, each satellite may only win prize money at a single level. Thus, this particular approach to structuring the prize will pay out all the prize money only if nine satellites are developed using at least three different approaches by at least three different companies. Table 1 describes the prize system quantitatively. Note that the number of levels, the pricing, and the percentages are somewhat arbitrary. They are chosen to give one or two satellites a real chance at profitability and the others a significant subsidy. Obviously, there may be other sets of levels that may be more effective. If successful, this prize system would require $2 billion, about one year’s development of the new human deep space system that might put humans on an asteroid in 2025, about the cost of a flagship deep space mission, or a little more than the cost of one shuttle launch6. While all of these are worthy projects, their impact pales beside the impact of a successful SSP industry. If successful, SSP could deliver essentially unlimited clean energy for a billion years and put the nations developing it in the world’s economic driver’s seat. It should also be noted that the launch systems and other development needed for a successful SSP industry would **make other space projects much easier** and cheaper than they are today. In an era of limited budgets, one wonders why billions are allocated to projects of great interest but little practical day-to-day value while projects such as SSP that could revolutionize life on Earth, not to mention space development, languish with essentially no funding.

#### Prizes are key to large-scale SPS development – the government gets the money back if companies fail

Globus 11Al Globus, Chair of the National Space Society's Space Settlement Advocacy Committee, July 2011, “A SPACE SOLAR POWER INDUSTRY FOR $2 BILLION OR YOUR MONEY BACK”

A system of prizes to develop space solar power (SSP) is proposed. If successful, a one or two billion dollar investment could kick-start a vigorous SSP industry, which in turn could provide humanity with essentially unlimited quantities of clean electrical energy. If unsuccessful, the money is returned to its source. The prize is structured to subsidize the construction of nine SSP satellites by at least three different entrants using different designs. The prize is aimed at developing small SSP systems delivering a few tens of megawatts to utilities on the ground. Under some reasonable assumptions, the prize money is sufficient to make one or perhaps two of the satellites profitable and provide a significant subsidy to the other seven. **Once small SSP systems have been successfully developed, producing large systems that can make a real difference** to global energy production **will be much easier**. While $2 billion is a great deal of money, should this effort be successful, it is reasonable to hope that Earth’s energy and greenhouse gas problems could be solved.

#### **SPS-Alpha can be up and running in a few years with only a few billion dollars – new tech ensures feasibility and low costs**

Mankins 12 – John C. Mankins, President of Artemis Innovation Management Solutions LLC is an internationally recognized leader in space systems and technology innovation, spent 25 years at NASA and CalTech's Jet Propulsion Laboratory. He holds undergraduate (Harvey Mudd College) and graduate (UCLA) degrees in Physics and an MBA in Public Policy Analysis (The Drucker School at Claremont Graduate University). Mr. Mankins is a member of the International Academy of Astronautics (IAA) and Chair of the Academy Commission III (Space Systems and Technology Development); and a member of the International Astronautical Federation (IAF), the American Institute of Aeronautics and Astronautics (AIAA), and the Sigma Xi Research Society. Editor/Authors are :Brian Wang, Director of Research. Sander Olson, Interviews and other articles Phil Wolff, Communications and social technologist. Alvin Wang. Computer, technology, social networking, and social media expert. June 7th, 2012, "A New Paradigm for Space-Based Solar Power," nextbigfuture.com/2012/06/new-paradigm-for-space-based-solar.html

Question: How exactly has the technology evolved since the 1970s? ¶ There have been a number of improvements. The **efficiency of solar photovoltaics has improved** from less than 10% efficiency to more than 30% efficiency now. I'm confident that within the next decade, solar photovoltaics could achieve efficiencies of up to 50%. There have also been **substantial improvements in key electronic components**, such as solid-state power amplifiers. The efficiencies have gone from 15% in the 1970s to **70% now**. With focused investments, we should be able to get devices with efficiencies approaching 80% by 2020. This will further increase the viability of space-based solar power. A wide range of other technologies have also improved dramatically, including **light-weight and high-strength materials, robotics, in-space propulsion and others.** ¶ Question: You are the chief architect behind the SPS-ALPHA design. What are the central aspects of this new paradigm? ¶ The SPS-ALPHA concept facilitates the design and development of a very large solar power satellite out of a large number of very small pieces. Each piece weighs perhaps 25-100 kilograms, but there are tens of thousands of pieces in the final product. **The beauty of this system is that all of the parts of the design can be manufactured readily in a standard factory – resulting in very low costs for the system hardware.** ¶ Question: So the power satellite would be composed of vast numbers of identical modules? ¶ Yes, the modules would be stackable – like pizza boxes – for ease of transportation to space, and then unstacked and assembled once they reach the operational orbit for the satellite. There might be about 6 or 8 different types of modular elements, and each type would be mass produced with from hundreds to tens of thousands of copies. They would initially be launched into a low Earth orbit, and from there transferred to a higher orbit for integration into the SPS platform. We are looking at using robotic systems to assemble the panels. ¶ Question: So your plan employs robots for most of the construction? ¶ Yes. The SPS-ALPHA architecture would only employ people on the ground to supervise the robots operating in space. The goal would be to assume the intervention of astronauts only in the event of a problem that could not be resolved using robots. As a rule of thumb, we expect that it may cost from 100-times to 1000-times more to have a suited astronaut perform a task in a high Earth orbit than to have a remotely-supervised robot do it. This field of technology has advanced rapidly in the past decade, and so we plan to employ robots extensively. ¶ Question: How long would it take to get a prototype system up and running? ¶ With sufficient funding, we could have a ground based, rudimentary prototype up and running by 2014. **An early prototype in orbit could be** built by 2017-2018. And in about a decade, a larger pilot plant could be in geosynchronous Earth orbit, generating 10 megawatts. The total cost for this roadmap could be several billion dollars, with most of the cost coming in the last few years. As a point of comparison, the pilot plant would be approximately the same size as the International Space Station, which cost $100 billion to manufacture, launch into space and assemble. **The cost savings would result from using standard, mass-produced pieces, standard launch systems and robotic assembly in space.**

#### Recent studies prove that SPS tech exists now – terrestrial solar fails

Garretson 12 – Lt Col Peter Garretson is an airpower strategist currently serving on the CSAF’s Strategic Studies Group (HAF/CK). His previous assignment was at the Institute for Defence Studies and Analyses in New Delhi as an Air Force Fellow examining Indo–US long-term space collaboration under the sponsorship of the Council on Foreign Relations. Prior to that he was the chief of future science and technology exploration for the HQ USAF Directorate of Strategic Planning (AF/A8XC), Spring 2012, "Solar Power in Space?" Strategic Studies Quarterly Spring, <http://www.au.af.mil/au/ssq/2012/spring/garretson.pdf>

As of 2010, the fundamental research to achieve technical feasibility for the SPS [solar-power satellites] was already accomplished. Whether it requires 5–10 years or 20–30 years to mature the technologies for economically viable SPS now depends more on the development of appropriate platform systems concepts and the availability of adequate budgets. —International Academy of Astronautics (IAA), 2011 The world needs a constant supply of uninterrupted electrical power to enable and sustain economic growth; power its cities, factories, and vehicles; and provide energy for heating, cooling, lighting, cooking, and desalination. Long term, it is desirable to transition from an energy system based on fossil fuels—an exhaustible resource which alters the composition of our atmosphere with unknown long-term effects on our climate— to a system based upon renewable sources. Many see solar power as the answer, because the resource is so vast and available. However, traditional solar power has limitations that make it less than a perfect match for our society. It is highly intermittent (only a 20-percent duty cycle) due to weather effects (clouds, rain, dust), and its low density requires vast tracks of land. Worst of all, it is not available at night, requiring vast storage or nonrenewable backup systems. Space-based solar is an innovation designed to retain[s] the advantages of traditional solar power while sidestepping the disadvantages. The basics of the idea are quite simple. Rather than cope with the unpredictability and intermittency of solar power on the ground, go where the sun always shines. In geostationary orbit (GEO), the sun shines constantly and is 36 percent stronger, allowing a solar array to collect almost 10 times the amount of energy as the same array installed at mid latitude on the ground (see fig.1). Power can then be transferred (beamed) directly to where it is needed. The technologies to do this are not magic or unfamiliar—they are the same elements used every day to emplace, power, and communicate with every existing satellite. Building the SBSP system would rely on the same familiar solar cells, radio transceivers, and rockets to propel them to GEO, only assembled on a grand different scale. In a mature system-of-systems, multiple solar-power satellites would reside in geostationary orbit, each collecting vast amounts of power and transmitting it through active electronic beam steering, like routers in a vast orbiting power internet. While appearing to hover above a particular location, each SPS could service multiple markets, providing power on demand to urban centers or remote locations. For example, a single satellite south of Baja California could service markets across most of North and South America; a satellite over the Indian Ocean could service markets as far apart as Africa and Indonesia, and from Diego Garcia to as far north as Russia. 1 Power in this system-of-systems would be transmitted using a technique called retrodirective phased array, where an encrypted pilot signal from the ground handshakes with the satellite’s active electronic beam-steering system to link transmitter and receiver. The beam itself would be in the ISM band (typically 2.45 or 5.8 GHz), so that it passes nearly full strength through the atmosphere, clouds, and rain. Because of low atmospheric losses (<2 percent), extremely efficient reconversion (>80 percent), and most of all, constant illumination, the beam can be safely kept at an amazingly low intensity (only one-sixth the intensity of sunlight) and yet be significantly more energy productive than a comparably sized terrestrial solar plant. The location and diameter of the beam are predictable and well confined. Unlike communications satellites—which, because of their small-aperture antennas, cast continent-sized footprints and must be separated by degrees (and thousands of miles) on orbit to deconflict signals—SPSs have very large apertures and therefore can send very narrow beams, allowing them to be spaced much closer together. The beam itself terminates on a receiver called a rectenna, with peak intensity in its center and tapering to nearly nothing at the periphery. The rectenna, about the size of a municipal airport, is a mesh of dipole antennas that capture all the incident energy from the beam. It is nevertheless 80 percent transparent to sunlight, allowing the land beneath to remain available for agricultural uses.

#### SPS is resilient, cost-effective, and efficient

Reed & Willenberg 4 – Head of the Welsom Space Consortium, and Harvey, PhD, Independent Review Team Leader for Space Power Research for NASA, Former Chief Scientist of the ISS (Kevin and Harvey, , "Early commercial demonstration of space solar power using ultra-lightweight arrays,” Acta Astronautica, Volume 65, Issues 9-10, accessed on Science Direct)

Future systems will be even more sensitive to specific power. A number of conceptual design architecture studies have been performed that offer promise for terrestrial electrical power generation by [SSP] space solar power, i.e. a constellation of large Earth-orbiting spacecraft that collect solar power, convert it to laser or microwave beams, and beam that power to terrestrial collectors that, in turn, convert that power to electricity.[1-3] To make this concept economically attractive, they must compete with current large power plants by economically generating Gigawatts (GW) of power. At 100 W/kg, such a power station must weigh 2-5 ∙ 107 kg or more – a tall order for launch vehicles that currently place no more than 2-3 ∙ 103 kg into geosynchronous orbit. Recent technology advances in the area of thin film photovoltaic arrays offer a solution to the mass limitations of high power arrays. Thin film arrays, while the efficiency is only around 9-12%, are so lightweight that they offer specific powers in excess of 1,000 W/kg - a factor of ten or more above the current state of the art. Since these arrays are deployable, they can be packaged with minimum mass and volume, and readily deployed in space with **near-term demonstrable technologies**. This section provides an introduction to this possibility. The next section will discuss the specific advantages of lightweight arrays. Section 3 will describe near-term applications in the 50-500 kWe power range, both in space and in the high altitude atmosphere, as well as future directions for space power satellites and high-power electric thrusters. Section 4 discusses recent and ongoing plans for prototype testing of thin-film arrays in civil and military applications as well as commercial "NewSpace" applications. In Section 5, we discuss some key process steps required for commercial development of space solar power and wireless power transmission, with specific focus on the development pathway for these solar arrays. A development Roadmap is described in Section 6. A short summary is presented in Section 7, followed by references. 2. ADVANTAGES OF ULTRALIGHTWEIGHT ARRAYS Since the beginning of Earth-orbiting satellites, solar array technology has gone through two or three generations, and is on the verge of a new generation. Most early satellites were powered with crystalline silicon arrays, with power levels generally below about 6 kilowatts (kWe). These silicon arrays were heavy and operated at low efficiency, i.e. the amount of power produced per unit area of solar array started around 10-12% at beginning of life. These crystalline silicon arrays also degraded rapidly, dropping to 8-10% efficiencies after several years in space, as a result of radiation-induced degradation of the photovoltaic silicon and atomic oxygen-induced discoloration of the cover glass which protects the silicon from these environmental factors. In the 1990s, the technology for many, if not most, satellite solar arrays converted from these original silicon arrays to compound semiconductors, which generally used gallium arsenide plus a second or third semiconductor to capture a greater share of the solar spectrum and convert it to electricity. These compound dual-junction and triple-junction semiconductors are much more resistant to radiation and more efficient, with efficiencies of 20-24%. More recently, the ability to separate different wavelengths of the solar spectrum and tailor the incident light onto a stretched lens of selected semiconductors (separating red, yellow, green, and blue wavelengths) has shown indications of efficiencies as high as 40-50%.[4-5] Yet even at this nearly theoretical limit of efficiency, the power density level will reach only 300 W/kg. Until recently, the focus of most solar array technology development has been toward more efficient, more radiation-resistant arrays. This focus has been driven primarily by the challenge of deployment of large arrays. This challenge has limited the total array area that can be launched into space, and therefore the way to higher power arrays has been higher efficiencies. These rigid, higher efficiency solar arrays come at the cost, however, of relatively high mass - with the best rigid arrays able to produce about 80-100 Watts per kilogram (W/kg) at 30% efficiency, and the stretched lens arrays promising about 150 W/kg but limited to a total of around 10 kW by deployment considerations. Two dominant performance metrics in the selection of solar array technologies are this power/mass ratio (i.e. the amount of power that can be produced for each kilogram of total mass) and the volume of the stowed array as it is launched. These are important because of the mass and volume limitations on the launch vehicle that places the array into space, and the high cost of launching this limited mass and volume. Using launch vehicles available today, these limit the total power available to satellites in geostationary orbit to about 18 kWe. Higher powers will be highly desirable as the user demands for communications services continue to increase. Recent advances in the ability to place photovoltaic materials on very thin film substrates have produced a new generation of solar arrays. These advances allow arrays to be stowed in the launch vehicle in very compact configurations, and easily deployed to much larger arrays than have heretofore been achievable. These new, thin film arrays are much lighter - around 1200 W/kg, including the deployment systems. Laboratory test cells have been produced by Institut de Microtechnique at the University of Neuchatel, Switzerland using LaRCTM-CP1 thin-film substrates produced by SRS Technologies in Huntsville, AL that have the highest power/mass ratio on record - 4300 W/kg![6] These thin film arrays can be stowed in a rolled or folded configuration in the launch vehicle and deployed in space by simple boom extension or roller mechanisms. A well-designed 50 kW space solar array and deployment system using rolled mechanisms with this specific power would weigh 32 kg with a payload volume the size of a suitcase. This low mass and payload volume, combined with high power density, can provide 50 kW+ space solar arrays at 25% of the cost of current rigid solar arrays. There are two approaches to thin film arrays: amorphous silicon (a-Si:H) and polycrystalline Cu(Ga,In)Se2 (CIGS). The Neuchatel partners have developed an array configuration that deposits amorphous silicon on SRS 6 µm-thick CP1TM polymer films, referred to as CP1/a-Si:H arrays. CIGS cells are generally deposited on 30 µm-thick metal foil substrates, a fact that assures that CIGS cells will be heavier than CP1/a-Si:H cells. Some basic comparisons between these solar arrays are summarized in Table 1. Using deployable thin-film arrays with specific powers in excess of 1,000 W/kg opens opportunities for large power levels in space. With current launch vehicles, this means that communications satellites can have 200 kWe or more in geosynchronous orbit, or that commercial platforms such as manufacturing sites or tourist destinations, can approach a MWe. With such possibilities, **this technology might drive the economics of [SSP] space solar power satellites into the profitable arena**, thereby contributing greatly to a non-petroleum-based worldwide electrical power grid. 3. APPLICATIONS Deployable thin-film arrays would have immediate applications with communications satellites and with high altitude aircraft. A 60 kWe array which can be rolled out in 20 kWe segments would greatly extend the useful lifetime of communications satellites – essentially tripling the array lifetime by rolling out 20 kWe of beginning-of-life (BOL) arrays at the end of the array's useful lifetime. An alternative application would be for much higher-power communications satellites, from 50 to 200 kWe, for higher data rates or power. A unique application may also be realized for recharging mobile batteries. Such an orbiting power platform may provide a source of electrical power for very distributed demands, such as for cellular phones and laptop computers. A 200 kWe solar array would have a mass of less than 200 kg. This would make a thin-film array attractive for still higher-power commercial applications, such as orbiting hotels – with expected demands in the 250 kWe to 1 MWe – and manufacturing sites. The latter would be either for sites for in-space construction of larger platforms, or for processing of materials in the microgravity environment of space. As the technology matures to the megawatt range, additional applications appear promising. For example, electric thrusters in the megawatt range would be attractive for human transportation to Mars and its moons. This technology can be developed in stages, perhaps using high altitude airships as platforms to demonstrate megawatt arrays. As the technology for high power thin film arrays matures, the logical next step would be solar power satellites. With a launch vehicle capable of placing 50,000 kg to geosynchronous orbit, 50 MWe platforms can be considered as building blocks for the GWe stations that would be required to provide a primary source of power for the electrical power grid. 4. DEVELOPMENT OF ULTRALIGHTWEIGHT ARRAYS Recent advances in the ability to place photovoltaic materials on very thin film substrates have produced a new generation of solar arrays. These advances allow arrays to be stowed in the launch vehicle in very compact configurations and easily deployed to much larger arrays than have heretofore been achievable. These new, thin film arrays are much lighter - around 1200 W/kg, including the deployment systems. Problematic to most thin-film solar arrays are radiation and atomic oxygen erosion. Test solar cells are made on CP1TM polyimide that is space-rated for 10 years in Geosynchronous Earth Orbit ( GEO), or SRS CORIN which is the only transparent uncoated commercial polyimide that will not erode in LEO. These flexible, 6 micron thick, thin film arrays, can be rolled or folded into a very low stowed volume in the launch vehicle configuration, and then deployed in space by simple boom extension or roller mechanisms. Such a typical 50 kW space solar array and deployment system would weigh 32 kg with a payload volume the size of a suitcase. This low mass and payload volume, combined with high power density, can provide 50 kW+ space solar arrays at 25% of the cost of current rigid solar arrays. The key technologies are ultra-thin, deployable arrays that generate power at acceptable efficiencies with high power density, and are resistant to atomic oxygen and radiation in the operational space environment.

## Plan

#### The United States federal government should create a prize system for electricity production of space solar power in the United States.

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#### We meet – incentives are in the United States

#### We meet – rectennas would be in the US

Snead 8 – James Michael Snead, senior member of the American Institute of Aeronautics and Astronautics, past chair of the Space Logistics Technical Committee, published in Aerospace America, the Air Force Air and Space Power Journal, the International Society of Logistics’ Logistics Spectrum magazine, the Journal of AstroPolitics, and the online Space Review, graduate of the Air Force Institute of Technology with Master's Degrees in Aerospace Engineering, November 19th, 2008, “The End of Easy Energy and What to Do About It,” National Space Society, <http://mikesnead.net/resources/spacefaring/white_paper_the_end_of_easy_energy_and_what_to_do_about_it.pdf>Possible rectenna locations in the United States 2.45/5.8 GHz SSP During the initial SSP studies, Rice University conducted a preliminary assessment of the continental United States to determine where the rectennas could be located. The initial assessment concluded that about 40% of the continental United States could be used to locate rectennas. Fifteen exclusion variables were used: inland waters, metropolitan areas, other populated areas, marshlands, perennially flooded lands, military reservations, waterways, designated habitats of endangered species, topography unacceptable, atomic energy commission lands, and lands excluded by three dimensions of electromagnetic compatibility problems. Further refinement of these criteria reduced the initial 40% estimate to about 17% or about 530,000 sq. mi.209 Noting that a rectangular area enclosing the elliptical rectenna and safety zone comprises about 100 sq. mi.,210 the suitable land in the United States could, therefore, support over **5,000 rectennas,** substantially greater than the approximately 250 SSP platforms that would likely be used.211

#### We meet – the plan says the United States – we only increase production that is topical

#### Counter-interpretation – energy production is conversion to electricity and this must be in the United States

PNL 78, Report Commissioned by the DOE Pacific Northwestern Laboratories "An Analysis of Federal Incentives Used to Stimulate Energy Production" March 1978 www.osti.gov/bridge/servlets/purl/7059750-iKeQE4/7059750.pdf

Energy production is defined as the transformation of natural resources into commonly used forms of energy such as heat, light, and electricity. By this definition, the shining of the sun or the running of a river are not examples of energy production, but the installation of solar panels or the construction of a hydroelectric dam are. Energy consumption is defined as the use of one of these common, "manufactured" forms of energy. Under this definition sunbathing is not energy consumption, but heating water by means of a solar panel is. In both definitions, the crucial ingredient is the application of technology and resources to change a natural resource into a useful energy form.

#### **We meet – energy production takes place at rectennas on the ground**

URSI 5 – International Union of Radio Science (URSI), November 2005, "Supporting Document for the URSI White Paper on Solar Power Satellite Systems," [www.ss.ncu.edu.tw/~ursi/record/WP\_SPS\_supdoc\_051129.pdf](http://www.ss.ncu.edu.tw/~ursi/record/WP_SPS_supdoc_051129.pdf)

The rectenna is extremely efficient in the energy conversion. The 82% of **the energy received** at the ground **is converted to usable electricity.** The microwave beam averages 8% of the power of full sunlight. The maximum energy rate at the center of the radio beam is ¼ of the maximum sunlight energy rate, as measured at high noon in the desert. Thus the total SPS energy arriving at the rectenna site would be a fraction of the solar energy that arrives at each square meter of the site. However, unlike the sunlight, most of this SPS energy will be recoverable, and will be available 24 hours per day. This results in an average output of almost 1500 Wh/day/m2 for a rectenna at the equator 19 compared to only 600 Wh/day/m2 for terrestrial photovoltaics.5

#### Prefer our definition – it’s contextual

Huijbregts 8 Mark A. J. Huijbregts is an associate professor at the Department of En- vironmental Science of the Radboud University. Nijmegen in the Netherlands. and Stefanie Hellweg, Rolf Frischknecht, Konrad Hungerbühler, A. Jan Hendriks "Ecological footprint accounting in the life cycle assessment of products" Ecological Economics, Volume 64, Issue 4, 1 February 2008, Pages 798-807 Accessed vis SciVerse

The ecoinvent database v1.2 ( [ecoinvent Centre., 2004] and [Frischknecht et al., 2005]), containing consistent and quality-controlled life cycle information for 2630 products and services consumed in the western economy, has been used to derive product-specific ecological footprints and ecoindicator scores. Table 2 provides an overview of the product groups and the corresponding number of products considered. A subset of the total number of products and services in ecoinvent (1549 processes) was included in the data analysis to maintain homogeneity within the product groups. Ecological footprints of all 2630 products and services are included as supporting information (Appendix B). Energy production includes both heat and electricity production processes by nonrenewable energy sources (oil, hard coal, lignite, natural gas, nuclear) and renewable energy sources (hydropower, photovoltaic, wood, wind). Material production comprises many different product types, including plastics, chemicals, metals, agricultural products, and building materials. Transport includes transport of products and persons by road, ship, train, airplane, and pipelines. Waste treatment represents various types of land fill, incineration, recycling, and wastewater. Finally, infrastructural processes include all types of infrastructure, such as power plants, furnaces, and lorries.

#### Ground – they double the size of the topic, make it bidirectional by allowing affs to affect both supply and demand – wrecks preparedness for all debates

#### Holistic energy education – they exclude wind and solar affs – they are naturally produced raw material

#### No uniqueness for their limits – the majority of teams read the same aff

#### Reasonability – competing interpretations are a race to the bottom to arbitrary exclude the aff

#### Err aff – T is a no risk option for the negative and there’s no way for the aff to get offense

## Solvency

#### Warming outweighs their impacts

NYET 6 (New York End Times, Non-Partisan News Filter Monitoring World Events Pertaining to Extinction, “The Extinction Scale”, 10-16-2006, http://newyorkendtimes.com/extinctionscale.asp)

We rate Global Climate Change as a greater threat for human extinction in this century. Most scientists forecast disruptions and dislocations, if current trends persist. The extinction danger is more likely if we alter an environmental process that causes harmful effects and leads to conditions that make the planet uninhabitable to humans. Considering that there is so much that is unknown about global systems, we consider climate change to be the greatest danger to human extinction. However, there is no evidence of imminent danger. Nuclear war at some point in this century might happen. It is unlikely to cause human extinction though. While several countries have nuclear weapons, there are few with the firepower to annihilate the world. For those nations it would be suicidal to exercise that option. The pattern is that the more destructive technology a nation has, the more it tends towards rational behavior. Sophisticated precision weapons then become better tactical options. The bigger danger comes from nuclear weapons in the hands of terrorists with the help of a rogue state, such as North Korea. The size of such an explosion would not be sufficient to threaten humanity as a whole. Instead it could trigger a major war or even world war. Under this scenario human extinction would only be possible if other threats were present, such as disease and climate change. We monitor war separately. However we also need to incorporate the dangers here.

#### SPS creation only emits a nebulous amount of CO2 and it's offset by the carbon-free power it creates

**Asakura**, Professor @ Azabu University, **2k** (Asakura, Keiichiro, Collins, Patrick, Nomura, Koji, Hayami, Hitoshi, and Yoshioka, Kanji, Department of Environmental Policy @ Azabu University, " CO2 Emission from Solar Power Satellite through its Life Cycle: Comparison of Power Generation Systems using Japanese Input-Output Tables," July, http://policy.rutgers.edu/cupr/iioa/AsakuraCollinsNomuraHayami&Yoshioka\_LifeCycleCO2.pdf, EMM)

In this paper we have analyzed the CO2 emission likely to be produced by a system of Solar Power Satellites in as much detail as possible, based on the DOE/NASA Reference System. Based on this analysis, in order to satisfy Japan's present electricity supply, some 18 SPSs of 5 GW output would be needed, which we have estimated would release some 470 million tons of CO2. Japan currently releases some 1.2 billion tons of CO2 per year, so it is clear that a large amount of CO2 is released when the SPS system is constructed. However, the overall CO2 output is of the same order as nuclear power stations at 20 kg per kWh. This is about 1/60 of the output of coal- red power stations, and 1/30 of the CO2 output of LNG- red power stations. Furthermore, the SPS-Breeder scenario shows signifcant improvement in CO2 emissions at only 11g per kWh. Of course SPS is a future technological system, and potential problems concerning various parts and components remain to be resolved, but our result suggests that the SPS is one of the most effective alternative technology for further CO2 reduction in electric power generation. One of the ways to solve Earth-wide environmental problems is to generate electric power in environmentally clean ways. The SPS system may give us the opportunity to solve this problem and to initiative the escape from a 'closed-Earth' industrial-economic system.

## States CP

#### Perm do both – shields the link to politics

Overby 3 – A. Brooke, Professor of Law, Tulane University School of Law, “Our New Commercial Law Federalism.” Temple University of the Commonwealth System of Higher Education Temple Law Review, Summer, 2003 76 Temp. L. Rev. 297 Lexis

We held in New York that Congress cannot compel the States to enact or enforce a federal regulatory program. Today we hold that Congress cannot circumvent that prohibition by conscripting the States' officers directly. The Federal Government may neither issue directives requiring the States to address particular problems, nor command the States' officers, or those of their political subdivisions, to administer or enforce a federal regulatory program. It matters not whether policymaking is involved, and no case-by-case weighing of the burdens or benefits is necessary; such commands are fundamentally incompatible with our constitutional system of dual sovereignty.n65 The concerns articulated in New York and echoed again in Printz addressed the erosion of the lines of political accountability that could result from federal commandeering.n66 Federal authority to compel implementation of a national legislative agenda through the state legislatures or officers would blur or launder the federal provenance of the legislation and shift political consequences and costs thereof to the state legislators. Left unchecked, Congress could foist upon the states **expensive or** unpopular programs yet shield itself from accountability to citizens**.** While drawing the line between constitutionally permissible optional implementation and impermissible mandatory implementation does not erase these concerns with accountability, it does ameliorate them slightly.

#### Perm do the counterplan – USFG could theoretically be the states

#### States is a voting issue

#### 1. Education – creates contrived debates no in the literature – there’s no solvency advocate – independent voting issue

#### 2. Decision-making – no one chooses between the federal and state governments – no opportunity cost

#### 3. Utopian fiat – no literature or aff ground

#### 4. Multi-actor fiat – infinite actors can fiat out of solvency deficits, makes debate unpredictable

#### State funding relies on bonds – perceived as unreliable

Stevens 11 (Paul, PRESIDENT AND CEO OF INVESTMENT COMPANY INSTITUTE, “OVERSIGHT OF THE MUTUAL FUND INDUSTRY: ENSURING MARKET STABILITY

AND INVESTOR CONFIDENCE”, June 24, BEFORE THE SUBCOMMITTEE ON CAPITAL MARKETS AND GOVERNMENT SPONSORED ENTERPRISES COMMITTEE ON FINANCIAL SERVICES UNITED STATES HOUSE OF REPRESENTATIVES, http://financialservices.house.gov/uploadedfiles/062411stevens.pdf)¶ The tax-exempt municipal securities market provides an important mechanism for the almost 90,000 units of state and local government to access capital primarily for infrastructure needs including schools, streets and highways, bridges, hospitals, public housing, sewer and water systems, power utilities, and various public projects. 145 The tax treatment of municipal securities in Section 103 of the Internal Revenue Code, which states that the interest on municipal bonds is exempt from federal income tax, serves to bolster demand for municipal securities. For many of these small government units, the municipal securities markets are the only way in which they can truly raise needed funding for their operations. Funds are a critical part of this market. At the end of 2010, individual investors held 33 percent of the $2.9 trillion municipal securities market through funds and another 37 percent directly. 146¶ Funds provide an efficient and cost-effective means for individual investors to obtain municipal securities. With approximately 1.2 million active municipal bonds, 147 however, the municipal securities markets are complex. Investors will naturally gravitate toward issues for which they have ready access to the detailed, consistent, and timely disclosure necessary to informed investment decisions. Unfortunately, under the current municipal securities regulatory regime, disclosure too often is limited, non-standardized, and often stale. 148¶ For these reasons, we repeatedly have called for reform of the municipal securities disclosure regime. 149 ICI consistently has supported SEC efforts to enhance the disclosure of information regarding municipal securities by amending Rule 15c2-12 under the Securities Exchange Act of 1934, which establishes requirements on the initial disclosure, periodic disclosure, and secondary market reporting of municipal securities. 151 The Rule requires dealers and underwriters, through contract, to obtain issuer representations that certain disclosures may be made. Since adoption, time has shown that the attenuated nature of this disclosure system is extremely difficult to enforce. 152¶ A better disclosure regime should be devised for this important market. Municipal securities now trade on a nationwide scale; their trading volume has increased substantially; and the market is composed of many complex instruments. Individual investors increasingly must evaluate not only default risk, but also market price and the corresponding value of a bond. The credit environment for municipal securities has become, and likely will continue to be, more challenging in the coming years, primarily in small or unrated issues. ¶ Until 2008, the need for better disclosure was tempered by the fact that most municipal securities were insured. It was presumed that in the absence of publicly available information, a bond insurer had ready access to the municipal issuer’s most recent financial statements and had performed necessary due diligence. Now, however, a smaller segment of the municipal securities market has bond insurance because of the skepticism of investors about the ability of the insurance industry to conduct quality risk assessments following the 2008 financial crisis. Disclosure gaps have been compounded by the adoption of a single global rating scale, which rates corporate and municipal securities on the same scale, and reduces the granularity of available information on municipal securities. Headline risk and the cyclical nature of retail trading further exacerbate the problem. Industry initiatives have made some headway for disclosure improvements in certain categories of municipal securities but these too are limited and voluntary. 153

#### New spending wrecks the California economy

Krol 12 Robert, Professor of economics at California State University Northridge and author of a forthcoming Cato Journal paper on state budget institutions, 2012, “California Needs a Spending Limit”, http://www.cato.org/publications/commentary/california-needs-spending-limit

California's budget is once again in the red. The governor signed a balanced budget in August of last year, but before the ink was dry, a slowing economy, the real estate bust and a spate of unplanned spending resulted in a significant budget crunch. The Legislative Analyst's Office now projects a deficit of about $10 billion over the next 18 months, and Gov. Schwarzenegger says the shortfall may be as high as $14 billion. To be sure, the slowing economy has reduced revenues, but excessive spending remains the root cause ofCalifornia's persistent financial troubles. The governor plans to declare a "fiscal emergency," requiring legislators in Sacramento to correct the deficit. The resulting legislation will likely include spending cuts, fee increases and borrowing. Details aside, Schwarzenegger must insist that any legislation contain an enforceable framework to help prevent future fiscal crises and allow for a voter referendum on a constitutional spending limit. The time is right**.** California's taxes are already high, so the solution is to control spending with a constitutional constraint limiting expenditure growth to inflation plus population growth. Schwarzenegger proposed a spending limit in 2005, but it was poorly designed, and voters had little incentive to support it. Now, the fiscal crunch is much worse. A new proposal should require legislators to get voter approval for any expenditures above the limit, and include a component allowing taxpayers to decide for themselves whether they want higher spending or a tax refund. Such a law would lessen the severity of budget shortfalls in economic downturns. Recent experience provides an example of how this would work. The state's revenues began to rise in the 2004-05 fiscal year. Since that time, pegging spending increases to inflation and population growth would have allowed spending to grow by 15 percent. Instead, expenditures increased by more than twice that much. If spending growth had been limited to 15 percent since 2004-05, we'd be facing a $7 billion surplus rather than a $2 billion deficit for the current fiscal year. Thirty states already have some form of a tax or government spending limit. Most of the limits link the growth of state expenditures to growth in personal income. California overwhelmingly passed a population growth plus inflation spending constraint in 1979, but it was amended by voters in 1990 to limit expenditure growth to increases in population plus growth in personal income. This more generous limit has never effectively constrained state spending. Linking spending growth to increases in population plus inflation is a more effective way to establish fiscal discipline in Sacramento. We know from other states that tax and spending limits can constrain the expansion of government. Research shows that the most effective limits are constitutional, written by voters and limit increases in spending rather than revenues. As an added bonus, financial markets reward states with expenditure limits by demanding lower interest rates on state borrowing. This offers significant savings over time. During economic booms, if revenues increase more than inflation plus population growth, the surplus should be refunded to taxpayers or used to shore up California's rainy-day fund. If state leaders wanted to spend some of the additional revenues, they should put their proposals up for a vote. California has little choice but to get its spending under control. Higher taxes are not an economically viable option. The Tax Foundation in Washington, D.C., ranks California 46th in its 2007 State Business Climate Rankings. Our neighboring states – Arizona, Nevada and Oregon – rank considerably better. Despite healthy revenue growth over the last few years, the California budget has been mismanaged. Schwarzenegger has been unable to make good on his pledge to reform Sacramento and get state lawmakers off of what he called "autopilot" spending. In the 2003 recall election, he ran as a budget reformer, promising he would "tear up the credit cards" and rein in runaway spending. He has failed to live up to his promises. A spending limit would give California some much-needed budget stability, and allow the governor to salvage his legacy. With a new fiscal mess brewing, it's time for him to try again.

#### California is key to the US economy

Williams 9 Juliet, writer for the Huffington Post, June 29, 2009, “California's Ailing Economy Could Prolong US Recession”, http://www.huffingtonpost.com/2009/06/29/californias-ailing-econom\_n\_222616.html

SACRAMENTO, Calif. — California faces a $24 billion budget shortfall, an eye-popping amount that dwarfs many states' entire annual spending plans. Beyond California's borders, why should anyone care that the home of Google and the Walt Disney Co. might stop paying its bills this week? Virtually all states are suffering in the recession, some worse than California. But none has the economic horsepower of the world's eighth-largest economy, home to one in eight Americans. California accounts for 12 percent of the nation's gross domestic product and the largest share of retail sales of any state. It also sends far more in tax revenue to the federal government than it receives giving a dollar for every 80 cents it gets back which means Californians are keeping social programs afloat across the country. While the deficit only affects the state, California's deepening economic malaise could make it harder for the entire nation's economy to recover. When the state stumbles, its sheer size 38.3 million people creates fallout for businesses from Texas to Michigan. "California is the key catalyst for U.S. retail sales, and if California falls further you will see the U.S. economy suffer significantly," said retail consultant Burt P. Flickinger, managing director of Strategic Resource Group. He warned of more bankruptcies of national retail chains and brand suppliers. Even if California lawmakers solve the deficit quickly, there will likely be more government furloughs and layoffs and tens of billions of dollars in spending cuts. That will ripple through the state economy, sowing fear of even more job losses.

#### States can’t fund new energy programs---budget constraints that result in tradeoffs

Berlin et al 12 Ken, senior vice president for policy and planning and general counsel at the Coalition for Green Capital, Reed Hundt is the CEO of the Coalition for Green Capital, Mark Muro is a senior fellow and the director of policy for the Metropolitan Policy Program at Brookings and Devashree Saha is a senior policy analyst and associate fellow at the Brookings Metropolitan Policy Program, "State Clean Energy Finance Banks: New Investment Facilities for Clean Energy Deployment", September, www.brookings.edu/~/media/research/files/papers/2012/9/12%20state%20energy%20investment%20muro/12%20state%20energy%20investment%20muro

State budget constraints are also severe. At the same time, state and local governments are also facing budget problems that will likely preclude efforts to offset the federal pull-back with bold new grant and subsidy programs. For one thing, state discretionary spending remains and is projected to remain depressed given the continued revenue impacts caused by the after-effects of the Great Depression.17 For another, states are also finding it difficult to issue new general obligation bonds. Bond issuance by states and others including cities, schools, hospitals, and other municipal entities fell to a 10-year low in 2011 after reaching a record high in 2010. Even though debt sales by states are up by 74 percent as of May 2012 compared to the same period in 2011, Moody’s notes that heightened fiscal management concerns will result in less new state borrowing, and that much of the increased issuance reflects refunding issues to take advantage of lower long-term interest rates rather than new money issues for new projects. For instance, states like California, Florida, and New Jersey have all reduced borrowing and are funding some capital projects on a pay-as-you-go basis even while contending with their constitutional budget restrictions. 18¶ In addition, federal fiscal austerity is likely to impose further challenges. With the direct federal aid to the states under ARRA now waning states will face increased fiscal stress that will vary depending on their ability to raise revenue and make cuts in other programs. The implication is that state governments that want to encourage continued clean energy investment in their states are now going to have to do it largely without major new grants, bonds, or subsidy programs.

#### Federal support for SPS is key to revitalize the aerospace sector

Mankins, President of SPA and Former NASA Scientist, 9 (John, Preeminent Global Expert on SSP, SPA = Space Power Association, President of ARTEMIS Innovation Management Solutions, Worked @ NASA for 25 Years, “To boldly go: the urgent need for a revitalized investment in space technology,” 5-18, <http://www.thespacereview.com/article/1377/1>)

Unfortunately, the US investment in advanced research and technology for space exploration and development has been reduced to historically low levels, and concurrently has been focused more narrowly than ever before on immediate system designs and development projects. In many respects, the current budget is little more than an “advanced development” program with minimal opportunity for innovation and essentially no possibility that an invention arising from civil space research and technology programs could influence system design decisions, inform budget estimates or inspire new, more ambitious space program goals. The challenge today Space has never been more important to our national security than it is today. The opportunities for truly profound scientific discoveries through space exploration have never been greater. And the pace of international development of new capabilities for space operations has never been faster. Federal budgets for advanced research and technology to enable future space exploration and development have been reduced in scope and focused on near-term system developments to the point that US preeminence in space activities is in question. NASA’s advanced space research and technology budget was over $2 billion in fiscal year (FY) 2005, with a focus on objectives five to ten years in the future and with the purpose of informing program and design decisions, while retiring both technical and budget risks of those future programs. The President’s FY 2007 budget for NASA exploration technology declined to less than $700 million, and of that only a small fraction (perhaps less than $200 million) still addressed longer-term objectives. The corresponding budgets in 2008 and 2009 were further reduced. Little to none of the remaining investment deals with enabling fundamentally new goals or objectives, or dramatically reducing expected costs. With these funding levels and program goals, it is unlikely that the US will maintain leadership in space exploration beyond the current generation of projects—all of which are founded on the “seed corn” harvested from past investments in innovative new space capabilities. Further, declining support for space research and technology is creating an innovation vacuum in the US as small business opportunities evaporate, and funding for universities and students vanishes. This trend jeopardizes America’s long-term leadership in space exploration and development, and damages our ability to achieve important national security goals. History Since the conclusion of the Apollo program in the early 1970s, the US space program has experienced varying levels of support from national leaders in the White House and the US Congress. Moreover, during most of that time human exploration beyond low Earth orbit has been “off the agenda”, with the exception of the short-lived Space Exploration Initiative (SEI) of 1989–1993. During the same period, US robotic exploration has had a number of tremendous successes, primarily involving the outer planets (e.g., Voyager spacecraft, Galileo, and more recently, Cassini), but also the inner solar system (e.g., Viking on Mars, Magellan at Venus), and the recent series of Mars missions (e.g., Pathfinder/Sojourner, Mars Observer, Spirit and Opportunity). However, these programs have tended to reflect one-of-a-kind successes with a minimal number of spacecraft and missions using common systems or technologies, resulting in continuing very high costs. Various attempts to create a foundation of common technologies and modular spacecraft have failed. Similarly, attempts to bridge the gap between robotic mission systems technologies and human space flight technologies (e.g., “Platform Z” from the early Space Station Freedom program) have failed. The most notable successes in this vein arose from the in-space assembly and spacecraft servicing capabilities of the Space Shuttle, first in the early 1980s with the Solar Max servicing mission, then with the series of hugely successful Hubble Space Telescope servicing missions, and finally with the assembly of the International Space Station. However, these achievements were far more the exception than the rule. For the most part human and robotic exploration systems and technologies became increasingly isolated beginning in the 1970s. More recently Following the Columbia tragedy in 2003, the direction of the US space program was again the subject of intense discussion (led by the White House) and including various agencies and organizations. The result, announced in January 2004, was the “Vision for Space Exploration” (VSE). The VSE as formulated originally was much more than a new justification for human space flight. Rather, the Vision addressed the full range of human and robotic exploration, as well as a revitalization of advanced space research and technology with far-reaching implications. The original VSE strategy placed strong emphasis on studies, research, and technology developments that would in time inform decisions regarding architectures and systems for (1) a Space Shuttle replacement; (2) annual robotic technology missions to the Moon; (3) a human return to the Moon to establish a permanent presence; (4) new space observatories to explore the universe beyond our solar system; (5) a campaign of robotic missions to Mars and beyond; and more. With current funding levels and program goals, it is unlikely that the US will maintain leadership in space exploration beyond the current generation of projects—all of which are founded on the “seed corn” harvested from past investments in innovative new space capabilities. However, in 2005 NASA shifted to a dramatically different approach to exploration and related technology developments with the results of the Exploration Systems Architecture Study. ESAS results placed exclusive emphasis on a US human lunar return and in an attempt to accelerate the first operational capability for the “crew exploration vehicle”—a capsule-based Space Shuttle replacement. To achieve this focus, numerous strategic changes were necessary. References to other aspects of space science and exploration were dropped, as was integrated planning of human and robotic exploration missions. For example, the initially planned annual campaign of robotic technology missions to the Moon was reduced to a single orbiter and one lunar lander mission, and these retained little or no role in guiding design decisions for human lunar systems. Also, to avoid technology-related risks, a range of lifecycle cost-related architectural options were eliminated from consideration, including in-space assembly of lunar transportation systems, in-space fueling and servicing, reusable lunar transportation systems, and others. The result was a family of systems for low Earth orbit access and a return to the Moon that involved a re-sized, Apollo-like architectural approach, with a heavy-lift launch vehicle and expendable transportation system elements. Significant shifts in agency budgets followed these new strategic directions, including drastic reductions in advanced space research and technology development, and a redefinition of remaining investments as “technology development”, focused on already-made design decisions. This shift in strategy was epitomized by NASA’s elimination of the NASA Institute of Advanced Concepts (NIAC) on the grounds of budget constraints, despite that fact that NIAC represented less than one third of one percent of the agency’s annual budget. The real point was that NIAC no longer had a legitimate role given NASA’s new approach to innovation: low engineering risk designs, and modest technology developments focused on those designs. Unfortunately, the elimination of design-to-cost and investments in longer-term innovation have come with a price. By recent estimates, the transportation-related cost of a single human mission to the Moon using the present, low-technology design solution will exceed $5 billion; transportation for two crewed lunar missions per year would require approximately 60% of NASA’s annual budget. Moreover, in-house agency subject matter expertise has been severely affected, as has the Agency’s contribution to US space technology leadership. Overall, the ambitious goals that were articulated by the White House in 2004 have been pushed into the indefinite future. A permanent human outpost of the Moon, development of lunar resources, deployment of large space observatories, and ambitious missions to the outer planets: all of these have been pushed out into the future by 20 years or more. Moreover, it is difficult to envision how such goals could ever be achieved using current systems concepts and concomitant prohibitively high costs. Only new systems concepts, enabled by focused space research and technology developments, can change this assessment. At the same time, real progress continues to be made by the international space community, grounded in steady investments in new technologies and systems—and resulting in regular accomplishments in space systems. The international flotilla of robotic space missions to the Moon illustrates this point: the US contribution of a single orbiter and a future lander are largely indistinguishable from the missions of other countries. Without an adequate strategy for, and more robust investment in, advanced space research and technology, long-term US preeminence in space exploration and development is doubtful. The Office of Naval Research (ONR) of the US Department of Defense (DOD) provides a useful example for how long-term but focused government research and technology advancement may be pursued. In particular, the ONR uses four complementary program strategies: a foundation of in-house subject matter expertise, sustained basic research and technology investments, development and demonstration of prototypes, and a focus on future capabilities. The concept of “Future Naval Capabilities” (FNCs) is used by the ONR to focus advanced research and technology (R&T) efforts around novel systems and concepts of operations. FNCs allow a range of R&T investments to be coordinated around specific new capabilities—even though the details of those systems designs have not yet been finalized, nor development programs approved. Also, the ONR uses the concept of “Innovative Naval Prototypes” (INPs) to orchestrate a range of ongoing R&T and draw the results of those efforts into nearer-term demonstrations of working prototypes and test-beds. INPs are characterized by ambitious technical objectives, and their potential to truly transform future naval operations. In addition, the ONR has preserved for over 60 years a commitment to long lead, discipline-oriented research and technology development. These investments have been responsible for advances in areas as diverse as materials, electronics, communications, power, and others—but all leading toward naval preeminence. And finally, DOD investments have maintained a foundation of in-house subject matter expertise at the Naval Research Laboratory (NRL) and other installations. Over the years, these in-house experts have enabled more effective technology investment decisions and, working with civilian and uniformed leaders better system acquisition decisions. Novel technologies and systems concepts must be matured and validated before decisions are made regarding the detailed designs of future space systems. There are a variety of business models that might be considered for space research and technology development. However, the strategies used by the ONR for its investments seem especially appropriate to the long-term character of the challenge of space exploration and development. For civil space exploration and development, these would be: (1) maintenance of in-house NASA subject matter expertise in relevant technologies; (2) sustained, discipline-oriented investment in basic research and technology at NASA centers, universities, and small businesses; (3) development and demonstration of transformational systems prototypes in partnerships involving NASA, major industry and others; and (4) a sustained focus on future space capabilities. And the results of these investments must be harvested before designs are finalized and system acquisition programs started. Assessment It is hardly consistent with the aspirations of Americans to “go where everyone has been before…” However, it is fantasy to suppose that the civil space program can affordably accomplish ambitious goals and objectives in space using systems concepts and technologies of the last century. Novel technologies and systems concepts must be matured and validated before decisions are made regarding the detailed designs of future space systems. In fact, numerous reports over a period of decades have established the criticality of a robust and focused investment in advanced research and technology, including the findings of several National Commissions, committees of the National Academy of Sciences, and others. Stable, robust, long-term federal investments in advanced research and technology for future civil space capabilities—funded at a level sufficient to assure US preeminence in space science, exploration, and utilization—are critical if we are to meet the challenges of this century: achieving ambitious goals in science and exploration, delivering on the promise of space to contribute to a strong national economy, maintaining a skilled aerospace workforce, and providing the foundations for future national security. It is time for the Congress and the White House—recognizing the challenges facing this nation’s space sector—to articulate and implement a strategy to revitalize advanced space research and technology and to make a sustained commitment to the implementation of that strategy. The recently chartered national study on the future of human space exploration, chaired by Norm Augustine, should take up this task. What should be done? The following actions are needed now: The federal government should revitalize its investment to invent and develop innovative new technologies for space science, exploration, and development, consistent with assuring US preeminence in space activities and industry’s ability to adopt these innovations for application in future space missions and markets. A balanced distribution should be created in the allocation of revitalized advanced space research and technology funding among more basic research efforts, technology maturation, and demonstrations of new technologies. These investments should be guided by the goal of creating ambitious new “future space capabilities”—well-enough defined to inform technology investments, but flexible enough to allow the results of those investments to influence designs, reduce costs, and enable new and more ambitious science goals. In establishing these investments, NASA must seek and embrace inputs from outside the agency (including other agencies, industry, academia) to develop, review, and recommend NASA advanced space research and technology plans, programs, and strategies. NASA in-house space research and technology (performed by engineers and technical specialists) should be restored, in balance with increased external research (by industry and academia). Funding for university research should also be targeted toward producing graduates with advanced degrees to support the follow-on work that will be undertaken by industry. We need to reconsider what makes an ambitious space program worth a substantial investment of public dollars—and consider again the historical and future importance of advancing space technology and developing truly new and valuable space capabilities for the public, the nation, and the world. To achieve the purposes for which it was created, NASA must maintain the excellence of its workforce and their expertise in a wide array of cutting-edge new technologies. As they enter the workforce, it will be impossible to attract the “best and the brightest” to federal service without a foundation of cutting-edge research and technology program opportunities. Moreover, a healthy NASA workforce, armed with appropriate skills and secure in its future, will provide better oversight for technical system procurement and program management. This competence will result in better performing systems, better ability to meet schedule, more productive interactions with other stakeholders in the aerospace enterprise, and more efficient use of taxpayer dollars. Although NASA must accommodate changing priorities and budgets, it must also ensure that it does not lose the important skills and knowledge currently possessed by its workers. NASA also must continue to ensure that the NASA workforce gains the new competencies needed in the aerospace industry of the future. In order accelerate the transition of novel technologies into transformational future space capabilities NASA must invest in demonstrations of innovative space prototypes on the ground and in space. Innovative space prototypes should be implemented in coordination with the DoD, academia, and industry; and wherever possible with co-funding with the private sector in order to speed the application of these new capabilities in creating new space industries. To implement these recommendations effectively, focused and timely near term action is essential: The National Academy of Sciences (National Research Council) should be chartered to conduct an independent, visionary study to identify 6–12 transformational “future space capabilities” that would—if developed—enable a wide range of new, ambitious, and affordable space exploration and development. These future space capabilities would in turn drive planning for government and industry research and technology investments. The Administration should develop—in consultation with the US Congress, and using NASA as its executive agent—a strategic research and technology development roadmap that establishes a baseline for achieving these goals, including objectives, schedules, milestones and budgets. This roadmap should be used to provide the basis for future US investments in advanced space research and technology development and demonstrations. The US space program needs more than a national discussion of what human exploration should do next: International Space Station research versus lunar outposts versus asteroid sorties versus human Mars missions, and so on. These are important questions. Even more, however, weneed to set in place basic policies that can endure from one administration to the next. We need to reconsider what makes an ambitious space program worth a substantial investment of public dollars—and consider again the historical and future importance of advancing space technology and developing truly new and valuable space capabilities for the public, the nation, and the world.

#### Aerospace solves cyberterrorism

Deloitte 12 | (Deloitte is a consulting and financial advisory service, Report Commissioned by the Aerospace Industries Association, " The Aerospace and Defense Industry in the U.S. A financial and economic impact study," March, http://www.aia-aerospace.org/assets/deloitte\_study\_2012.pdf)

The world continues to demonstrate how dangerous it is and how our civilization and way of life can be put in jeopardy quickly. The surprise attacks on Pearl Harbor and the tragic events surrounding the terrorist attacks of 9/11 have shown our nation how vulnerable it can be. Technology innovations and products developed in the aerospace and defense industry have made our nation safer, from sophisticated sensors that can “see” nefarious activities of our adversaries, to the bomb and metal detectors that have become ubiquitous at airports around the world, the industry continues to innovate to produce the necessary defenses used to increase our national security. Recent advances to counter the next generation national security threats include for example, sophisticated software to trace bank transactions of terrorists, advanced listening sensors to eavesdrop on communications of known terrorists, and sophisticated sensors to help discover threats at our airports, borders, and seaports. Of course, the unmanned aerial vehicle (UAV) has been extraordinarily successful in helping to see, then attack if necessary, our adversaries. Lastly, the specter of a potential cyber-attack on our nation’s water, power, transportation or communications infrastructure is cause for alarm, and the industry continues to develop the next generation technologies to address these and future threats.

#### Great power nuclear war

Fritz 9 | Researcher for International Commission on Nuclear Nonproliferation and Disarmament [Jason, researcher for International Commission on Nuclear Nonproliferation and Disarmament, former Army officer and consultant, and has a master of international relations at Bond University, “Hacking Nuclear Command and Control,” July, <http://www.icnnd.org/latest/research/Jason_Fritz_Hacking_NC2.pdf>]

This paper will analyse the threat of cyber terrorism in regard to nuclear weapons. Specifically, this research will use open source knowledge to identify the structure of nuclear command and control centres, how those structures might be compromised through computer network operations, and how doing so would fit within established cyber terrorists’ capabilities, strategies, and tactics. If access to command and control centres is obtained, terrorists could fake or actually cause one nuclear-armed state to attack another, thus provoking a nuclear response from another nuclear power. This may be an easier alternative for terrorist groups than building or acquiring a nuclear weapon or dirty bomb themselves. This would also act as a force equaliser, and provide terrorists with the asymmetric benefits of high speed, removal of geographical distance, and a relatively low cost. Continuing difficulties in developing computer tracking technologies which could trace the identity of intruders, and difficulties in establishing an internationally agreed upon legal framework to guide responses to computer network operations, point towards an inherent weakness in using computer networks to manage nuclear weaponry. This is particularly relevant to reducing the hair trigger posture of existing nuclear arsenals. All computers which are connected to the internet are susceptible to infiltration and remote control. Computers which operate on a closed network may also be compromised by various hacker methods, such as privilege escalation, roaming notebooks, wireless access points, embedded exploits in software and hardware, and maintenance entry points. For example, e-mail spoofing targeted at individuals who have access to a closed network, could lead to the installation of a virus on an open network. This virus could then be carelessly transported on removable data storage between the open and closed network. Information found on the internet may also reveal how to access these closed networks directly. Efforts by militaries to place increasing reliance on computer networks, including experimental technology such as autonomous systems, and their desire to have multiple launch options, such as nuclear triad capability, enables multiple entry points for terrorists. For example, if a terrestrial command centre is impenetrable, perhaps isolating one nuclear armed submarine would prove an easier task. There is evidence to suggest multiple attempts have been made by hackers to compromise the extremely low radio frequency once used by the US Navy to send nuclear launch approval to submerged submarines. Additionally, the alleged Soviet system known as Perimetr was designed to automatically launch nuclear weapons if it was unable to establish communications with Soviet leadership. This was intended as a retaliatory response in the event that nuclear weapons had decapitated Soviet leadership; however it did not account for the possibility of cyber terrorists blocking communications through computer network operations in an attempt to engage the system. Should a warhead be launched, damage could be further enhanced through additional computer network operations. By using proxies, multi-layered attacks could be engineered. Terrorists could remotely commandeer computers in China and use them to launch a US nuclear attack against Russia. Thus Russia would believe it was under attack from the US and the US would believe China was responsible. Further, emergency response communications could be disrupted, transportation could be shut down, and disinformation, such as misdirection, could be planted, thereby hindering the disaster relief effort and maximizing destruction. Disruptions in communication and the use of disinformation could also be used to provoke uninformed responses. For example, a nuclear strike between India and Pakistan could be coordinated with Distributed Denial of Service attacks against key networks, so they would have further difficulty in identifying what happened and be forced to respond quickly. Terrorists could also knock out communications between these states so they cannot discuss the situation. Alternatively, amidst the confusion of a traditional large-scale terrorist attack, claims of responsibility and declarations of war could be falsified in an attempt to instigate a hasty military response. These false claims could be posted directly on Presidential, military, and government websites. E-mails could also be sent to the media and foreign governments using the IP addresses and e-mail accounts of government officials. A sophisticated and all encompassing combination of traditional terrorism and cyber terrorism could be enough to launch nuclear weapons on its own, without the need for compromising command and control centres directly.

## Capitalism K

#### Simulate the enactment of the plan and weigh the consequences versus the alternative – it’s key to decision-making and fairness – they moot the 1AC and make it impossible to be aff

#### Perm do both

#### Only combining particular and universal politics solves

Butler 4 – Professor of Rhetoric at Berkeley 2004 Judith The Judith Butler Reader, page 339-340

My sense is that universality takes on its life precisely when it exceeds the strategic intentions of its speaker and that it is **extremely mobile**. What does and does not count as universal, as the universal reach of human obligation and right? That is a question that is constantly on the table. For instance, when the Vatican says that it is very interested in human rights but that homosexuality is an assault on “the human,” what it is in effect saying is that homosexual humans are destroying the human by virtue of their homosexuality, and the rights that pertain to humans do not pertain to them because they have in some sense disqualified themselves from the human by virtue of their homosexuality. If the homosexual then, nevertheless, gets up out of her or his abject state and says, “I am human, and I deserve some rights,” then in that moment there’s a certain paradox: universality is actually being asserted precisely by the one who represents what must be foreclosed for universality to take place. This is one who’s outside of the legitimating structure of universality but who nevertheless speaks in its terms and makes the claim without prior legitimation in order to assume legitimation as a performative consequence of the claim itself. It seems to me that this is the position that gay rights activists are in time and time again, often in relation to other human rights activists groups. It took a long time, for instance, for Human Rights Watch or the ACLU or Amnesty International or other organizations to bring gay questions into human rights issues because they were afraid that they would lose the ability to have connections with certain countries, so they made the case for human rights on other grounds. So what does this mean? It means that the notion of universality is in crisis. As Laclau points out, any notion of universality is based on a foreclosure: there must be something that is not included within the universal; there must be something that is outside of it for the universal to make sense; there must be something that is particular, that is not assimilable into the universal. What happens when that particular – that particular identity that cannot lay claim to the universal and who may not – nevertheless lays claim to the universal? It seems to me that the very notion of universality is brought into an extremely productive crisis and that we get what might be understood as spectral invocations of the universal among those who have no established, legitimate right to make the claim. So, I like the idea that universality is a discourse that is driven into crisis again and again by the foreclosures that it makes and that it’s forced to rearticulate itself. Where I agree with the project of hegemony that Laclau and Mouffe lay out is that for me the process of a universality that is brought into crisis again and again by what is outside of itself is an open-ended one. **Universality,** in that sense, **would not be violent or totalizing; it would be an open-ended process, and the task of politics would be to keep it open,** to keep it as **a contested site of persistent crisis and not to let it be settled.**

#### Evaluating consequences is most ethical – Bosnia proves

Gvosdev 5 – Nikolas Gvosdev 5 (Nikolas, Exec Editor of The National Interest, The Value(s) of Realism, SAIS Review 25.1, Muse)

As the name implies, realists focus on promoting policies that are achievable and sustainable. In turn, the morality of a foreign policy action is judged by its results, not by the intentions of its framers. A foreign policymaker must weigh the consequences of any course of action and assess the resources at hand to carry out the proposed task. As Lippmann warned, Without the controlling principle that the nation must maintain its objectives and its power in equilibrium, its purposes within its means and its means equal to its purposes, its commitments related to its resources and its resources adequate to its commitments, it is impossible to think at all about foreign affairs.8 Commenting on this maxim, Owen Harries, founding editor of The National Interest, noted, "This is a truth of which Americans—more apt to focus on ends rather than means when it comes to dealing with the rest of the world—need always to be reminded."9 In fact, Morgenthau noted that "there can be no political morality without prudence."10 This virtue of prudence—which Morgenthau identified as the cornerstone of realism—should not be confused with expediency. Rather, it takes as its starting point that **it is more moral to fulfill one's commitments than to make "empty" promises, and to seek solutions that minimize harm and produce sustainable results**. Morgenthau concluded: [End Page 18] Political realism does not require, nor does it condone, indifference to political ideals and moral principles, but it requires indeed a sharp distinction between the desirable and the possible, between what is desirable everywhere and at all times and what is possible under the concrete circumstances of time and place.11 This is why, prior to the outbreak of fighting in the former Yugoslavia, U.S. and European realists urged that Bosnia be decentralized and partitioned into ethnically based cantons as a way to head off a destructive civil war. Realists felt this would be the best course of action, especially after the country's first free and fair elections had brought nationalist candidates to power at the expense of those calling for inter-ethnic cooperation. They had concluded—correctly, as it turned out—that the United States and Western Europe would be unwilling to invest the blood and treasure that would be required to craft a unitary Bosnian state and give it the wherewithal to function. Indeed, at a diplomatic conference in Lisbon in March 1992, the various factions in Bosnia had, reluctantly, endorsed the broad outlines of such a settlement. For the purveyors of moralpolitik, this was unacceptable. After all, for this plan to work, populations on the "wrong side" of the line would have to be transferred and resettled. Such a plan struck directly at the heart of the concept of multi-ethnicity—that different ethnic and religious groups could find a common political identity and work in common institutions. When the United States signaled it would not accept such a settlement, the fragile consensus collapsed. The United States, of course, cannot be held responsible for the war; this lies squarely on the shoulders of Bosnia's political leaders. Yet Washington fell victim to what Jonathan Clarke called "faux Wilsonianism," the belief that "high-flown words matter more than rational calculation" in formulating effective policy, which led U.S. policymakers to dispense with the equation of "balancing commitments and resources."12 Indeed, as he notes, the Clinton administration had criticized peace plans calling for decentralized partition in Bosnia "with lofty rhetoric without proposing a practical alternative." The subsequent war led to the deaths of tens of thousands and left more than a million people homeless. After three years of war, the Dayton Accords—hailed as a triumph of American diplomacy—created a complicated arrangement by which the federal union of two ethnic units, the Muslim-Croat Federation, was itself federated to a Bosnian Serb republic. Today, Bosnia requires thousands of foreign troops to patrol its internal borders and billions of dollars in foreign aid to keep its government and economy functioning. Was the aim of U.S. policymakers, academics and journalists—creating a multi-ethnic democracy in Bosnia—not worth pursuing? No, not at all, and this is not what the argument suggests. But aspirations were not matched with capabilities. As a result of holding out for the "most moral" outcome and encouraging the Muslim-led government in Sarajevo to pursue maximalist aims rather than finding a workable compromise that could have avoided bloodshed and produced more stable conditions, the peoples of Bosnia suffered greatly. In the end, the final settlement was very close [End Page 19] to the one that realists had initially proposed—and the one that had also been roundly condemned on moral grounds.

#### Perm do the plan and non-competitive parts of the alt

#### Action with policy relevance is key when survival is at stake

Norton 5 (Bryan G, professor of philosophy at the Georgia Institute of Technology, “Sustainability: A Philosophy of Adaptive Ecosystem Management”, University of Chicago Press, November 1, 2005, pp. 151-154)

Pragmatists pay attention to the particularities of unique situations. In action-forcing situations, it is often possible to provide helpful, if context- sensitive, guidance to decide what to accept as certain enough to guide action and what is not so certain and therefore requires further study. These decisions, which occur within a value-laden context, allow us to use agreements about values—however limited and situation-specific—to accept certain goals as consensus goals. Then we can pursue observations and management experiments to reduce debilitating uncertainty regarding techniques to achieve those goals. Shared values and goals can, in this way, sometimes serve as the solid ground on which to stand to undertake experimentation with means to achieve the goals, thereby reducing uncertainty about system functioning. At other times, of course, beliefs about the system and its behavior seem undeniable, and we can stand on these planks to deliberate about realistic and wise goals. The epistemology of adaptive management thus provides for gradual progress and improvement of both our belief system and our preferences and values, by using experience to triangulate between temporarily accepted beliefs and values. The most controversial aspect of this knowledge- seeking strategy, perhaps, is the idea that in concrete situations shared values can sometimes serve as a solid basis upon which to pursue mission-oriented science to reduce uncertainty about outcomes of our choices. To explore this idea, it is essential that we understand environmental values in such a way that through successive applications of our method, values can be improved over time. In this and the remaining chapters in part 2,1 provide such a context-sensitive approach that can serve to bootstrap both our values and our factual understanding of management situations simultaneously.¶ Likening our epistemological problem to a ride on Neuraths boat, which is required to stay afloat indefinitely while repairs are made, we can understand our problem as one of deciding which of our beliefs to accept as strong enough and which should be submitted to immediate and critical review and testing. Sailors on the boat are motivated by their desire to survive, and so they undertake the repairs on the boat with great deliberation and care. They must not only make important technical judgments regarding which planks are becoming weak with age and rot, but they must also make judicious choices regarding which planks must, given the importance of their function, be given priority. Analogously, as adaptive managers, we are driven by the desire to stay afloat and to prosper as a community, and we must similarly decide carefully what beliefs to accept as given, which should be doubted, and which points of uncertainty are of highest priority, given the shared goals of the community. Like Neuraths sailors, we must make such epistemological judgments under pressure; if we guess wrong and stand on a weak board to fix a stronger one, we face danger, if we stand on a strong board and fix a weak one, we could still face danger if, for example, we choose to fix weak boards of no direct importance to the seaworthiness of the vessel and ignore others that might fail catastrophically. We must, like Justice Holmes's judge, act in a way that fulfills several social demands, including the demand that the present decision be both consistent with precedent and legal tradition and also responsive to the new demands of a new situation.¶ The particular context of a real management dilemma—a context always suffused with value—can be very important for pragmatists in determining which beliefs should be accepted, however provisionally, and which should be submitted to more intense scrutiny by observation and experiment. The necessity of acting—and refraining from action is itself an action—enforces a kind of discipline, a discipline felt in a particular situation with real values at stake. In some situations, for example when the very existence of the community is threatened, decisions can be seen against a backdrop of unquestioned values (community survival); in these situations consensus on values may be far stronger than consensus on science. Epistemological decisions, in situations where decisions are forced and important values are at stake, thus involve judgments of importance as well as truth. We can only examine our whole belief system and try to find some beliefs we can temporarily place beyond doubt. Given the goal of management, we first concentrate on beliefs that are most important to the ongoing voyage, postponing examination of others until later: we keep our ship afloat, gradually transforming it plank by plank. Similarly, adaptive managers sometimes, by hypothesis, help themselves to a platform of beliefs in order to question the goals that should be pursued; and at other times we assume our goals are worthy ones and proceed to test appropriate scientific hypotheses related to the attainment of those goals. Optimistically, the adaptive manager believes that this platform, which shifts over time and in the process of many trials, yields improved understanding and improved goals through an alternation between action and reflection. This may be the only effective way to respond to wicked problems as they arise in a community with diverse and sometimes competing values.¶ Of course one might object that this whole process is circular and that no "true" justification of goals or actions takes place. We assume facts to support values, and we then stand on the values to support the importance of scientific research to reduce uncertainty and to allow actions to support those values. Now we play our epistemological trump card—the ability of diverse communities, if they operate in an open, democratic mode—to focus attention on weak assumptions and unjustifiable principles. In open public debate and open public processes, when well-informed stakeholders have free access to information and to political institutions, diverse members of a community will have an incentive to identify weaknesses—scientific, economic, and moral—in policies proposed by competing groups. If a process can be created that mimics the process the repairmen on Neuraths boat must develop if they are to survive, then we can give up the dry dock of a priori, self-evident truths and trust science and the observational method, especially if empowered by a strong sense of shared community values, to identify weak planks and keep the boat afloat. So a reasonable way to proceed, in an adaptive management framework, is to inspire stakeholders and participants to challenge and question both the beliefs of science and the proposed goals and values. Democracy, in this sense, can be a powerful engine of truth-seeking. A diverse population, in adaptive management as well as in Darwinian evolution, increases adaptability, by exploring a variety of available options, winnowing out the weak assumptions, and pursuing the most justifiable goals within a particular situation.¶ Provided Neuraths analogy is apt, we can proceed with our analysis, having established a crucial role for values in our epistemological choices; now we turn our attention to improving our understanding of, and language for describing, environmental values. We want to understand environmental values theoretically. As adaptive managers, however, we are also interested in the way they function in a process of local, community-based experimental management. So far I have emphasized the practical costs of not having at our disposal a coherent and intelligible language, and an associated explanatory theory, for discussing environmental values and policy. These practical difficulties were symbolized by the crooked corridors at EPA; and none of EPA's corridors of communication are more crooked and blocked than those through which information about environmental values and goals should flow.¶ One important requirement of straightened corridors of communication is the creation of an integrative language that allows cross-disciplinary and cross-interest-group communication. So one task is to develop some clearer ways of talking about environmental values, relating them to the statements of disciplinary and integrative sciences, and—most importantly and most practically—creating an enlightening, integrative discourse about environmental science, values, and policy goals. If we are to go beyond simply improving communication, however, and move toward substantive agreements about what to do to protect resources and live sustainably, we must also provide a theoretical structure that connects the ideal of sustainability to justifiable environmental policy goals that can be operationalized, goals that can be stated and pursued in real-life communities with real-life problems. The purpose of this part of the book is two-fold: to improve our linguistic tools for communication about environmental values and to offer the broad outlines of a positive theory of environmental values.¶ Pragmatists, from Peirce to Leopold, and adaptive managers are not anti-theory; they are; however, very wary of theory cut loose from possible observation. No beliefs are ultimately immune from revision in the face of experience; all theory must sooner or later stand the test of experience, which helps us to separate truth from falsehood and nonsense. This generalization applies to theories of environmental value no less than to empirical hypotheses about causal factors. The goal of such a process is to create theory as a general reflection of experience and to avoid a priori theory invoked to dictate the general shape of any environmental values. By testing proposed theories against their performance in articulating, clarifying, and justifying real environmental goals of real communities, we gradually hone a language that will help communities in the future to ask the right questions and to improve their chances of achieving meaningful improvements in their policies.

#### It’s inevitable

Wood 2 (Ellen M., Ph.D in political science from UCLA, The Origin of Capitalism, pg. 4-6)

These question-begging explanations have their origina in classical political economy and Enlightenment conceptions of progress. Together, they give an account of historical development in which the mergence and growth to maturity of capitalism are already prefigured in the earliest manifestations of human rationality, in the technological advances that began when Homo Sapiens first wielded a tool, and in the acts of exchange human beings have practised since time immemorial. History’s journey to that final destination, to ‘commercial society’ or capitalism, has, to be sure, been long and arduous, and many obstacles hace stood in its way. But its progress has nonetheless been natural and inevitable. Nothing more is required, then, to explain the ‘rise of capitalism’ than an account of how many obstacles to its forward movement have been lifted- sometimes gradually, sometimes suddenly, with revolutionary violence. In more accounts of capitalism and its origin, there really *is* no origin. Capitalism seems always to be there, somewhere; and it only needs to be released from its chains- for instance, from the fetters of feudalism- to be allowed to grow and mature. Typically, these fetters are political: the parasitic powers of lordship, or the restrictions of an autocratic state. Sometimes they are cultural or ideological: perhaps the wrong religion. These contraints confine the free movement of ‘economic’ actors, the free expression of econmic rationality. The ‘economic’ in these formulations is identified with exchange or markets; and it is here that we can detect the assumption that the seeds of capitalism are contained in the most primitive acts of exchange, in any form of trade or market activity. That assumption is typically connected With the other presupposition: that history has been an almost natural process of technological development. One way or another, capitalism more or less naturally appears when and where expanding markets and technological development reach the right level, allowing sufficient wealth to be accumulated so that is can be profitably reinvested. Many Marxist explanations are fundamentally the same- with the addition of bourgeois revolutions to help break the fetters. The effect of these explanation is to stress the continuity between non-capitalist and capitalist societies, and to deny the disguise of the specificity of capitalism. Exchange has existed more or less forever, and it seems that the capitalist market is just more of the same. In this kind of argument, because capitalism’s specific and unique need constantly to revolutionize the forces of production is just an extension and an acceleration of universal and transhistorical, almost natural, tendencies, industrialization is the inevitable outcome of humanity’s most basic inclinations. So the lineage of capitalism passes naturally from the earliest Babylonian merchant through the medieval burgher to the early modern bourgeois and finally to the industrial capitalist. There is similar logic in certain Marxist versions of this story, even though the narrative in more recent version often shifts from the town to the countryside, and merchants are replaced by rural commodity producers, small or ‘middling’ farmers waiting for the opportunity to blossom into full-blown capitalists. In this kind of narrative, petty commodity production, released from the bonds of feudalism, grows more or less naturally into capitalism, and petty commodity producers, just given the chance, will take the capitalist road. Central to these conventional accounts of history are certain assumptions, explicit or implicit, about human nature and about how human beings will behave, if only given the chance. They will, so the story goes, always avail themselves of the opportunity to maximize profits through acts of exchange, and in order to realize that natural inclination, they will always find ways of improving the organization and instruments of work in order to enhance the productivity of labor.

#### No root cause

Larrivee 10— PF ECONOMICS AT MOUNT ST MARY’S UNIVERSITY – MASTERS FROM THE HARVARD KENNEDY SCHOOL AND PHD IN ECONOMICS FROM WISCONSIN, 10 [JOHN, A FRAMEWORK FOR THE MORAL ANALYSIS OF MARKETS, 10/1, <http://www.teacheconomicfreedom.org/files/larrivee-paper-1.pdf>]

 The Second Focal Point: Moral, Social, and Cultural Issues of Capitalism Logical errors abound in critical commentary on capitalism. Some critics observe a problem and conclude: “I see X in our society. We have a capitalist economy. Therefore capitalism causes X.” They draw their conclusion by looking at a phenomenon as it appears only in one system. Others merely follow a host of popular theories according to which capitalism is particularly bad. 6 The solution to such flawed reasoning is to be comprehensive, to look at the good and bad, in market and non-market systems. Thus the following section considers a number of issues—greed, selfishness and human relationships, honesty and truth, alienation and work satisfaction, moral decay, and religious participation—that have often been associated with capitalism, but have also been problematic in other systems and usually in more extreme form. I conclude with some evidence for the view that markets foster (at least some) virtues rather than undermining them. My purpose is not to smear communism or to make the simplistic argument that “capitalism isn’t so bad because other systems have problems too.” The critical point is that certain people thought various social ills resulted from capitalism, and on this basis they took action to establish alternative economic systems to solve the problems they had identified. That they failed to solve the problems, and in fact exacerbated them while also creating new problems, implies that capitalism itself wasn’t the cause of the problems in the first place, at least not to the degree theorized.

#### Perm do the alt – justified by vague alts and floating PIKs, which are both voting issues for being unpredictable and stealing aff ground

## 2AC Immigration

#### No deportations --- takes out the internal link to instability

Collins 11 – Michael, Ventura County Star, January 26, 2011, “Gallegly says administration not tough enough on undocumented workers,” online: http://www.vcstar.com/news/2011/jan/26/gallegly-says-administration-not-tough-enough-on/?print=1

Gallegly and other Republicans on the panel charged that, under President Barack Obama, the U.S. Immigration and Customs Enforcement has relaxed the get-tough approach it had taken under former President George W. Bush in dealing with illegal workers. ¶ The result, GOP lawmakers said, is illegal immigrants are taking jobs from American workers. ¶ “The Obama administration’s strategy clearly does a grave disservice to American workers,” said Gallegly, the new chairman of the House Judiciary Committee’s Subcommittee on Immigration Policy and Enforcement. ¶ Worksite enforcement must ensure “those jobs that are available go to Americans and legal immigrants,” he said.¶ Gallegly, a Simi Valley Republican, has made the fight against illegal immigration the signature issue of his two-decadelong congressional career. But he has promised “fair and responsible oversight” of immigration policy as the new subcommittee chairman.¶ Wednesday’s hearing, the first under Gallegly’s leadership, focused on whether Immigration and Customs Enforcement is doing enough to keep illegal immigrants out of the workplace. The title of the hearing: “ICE Worksite Enforcement: Up to the Job?”¶ The answer, at least for Republicans on the panel, appeared to be “no.”¶ Rep. Lamar Smith, R-Texas and the new chairman of the House Judiciary Committee, charged that worksite enforcement has plummeted under the Obama administration, with administrative arrests of undocumented workers falling by 77 percent and criminal arrests falling by 60 percent over the past two years. ¶ Criminal indictments have fallen 57 percent and criminal convictions have dropped 66 percent during the same period, Smith said.

#### Stability is resilient

LA Monitor 9 [Latin America Monitor, “Sabres Rattling, But Military Conflict Unlikely” Nov 09 http://www.latinamericamonitor.com/file/84433/sabres-rattling-but-military-conflict-unlikely.html]

BMI View: Tensions between Venezuela and Colombia remain heightened, due to the formers' belligerent rhetoric and recent destruction of bridges straddling the border. Although the risks of a confrontation have risen, we maintain the view that outright military conflict is improbable, given underlying economic interdependencies and likely mediation efforts by other regional powers. Venezuelan President Hugo Chávez has shown few signs of wanting to defuse tensions with neighbouring Colombia, suggesting that relations will remain frosty for some time to come. On November 26 the Venezuelan armed forces threatened to blow up six more footbridges two where destroyed last week which it alleges are being used for the 'illegal smuggling of gasoline, food and drugs'. This announcement came only a day after a plea by Venezuela's Ambassador to the United Nations that the international organisation should review Colombia's decision to allow US military bases on its soil. Nevertheless, while the heat between the two neighbours may rise further, we remain of the view that outright military conflict is unlikely, as neither side stands to gain anything from an escalation in hostility. To be sure, Colombian President Álvaro Uribe has maintained his calm in the face of Chávez's provocations, and last week ruled out any retaliation for Venezuela's bridge-destruction spree. Like Caracas, Bogota has announced a rise in troop deployment along the 2000-km long border, but this in all probability a symbolic reaction rather than a sign of a preparation for war. Needless to say, a key reason why a clash would cause mutual harm is the strong economic interdependency between the two countries they are respectively each other's second largest trading partners after the US. Colombia has already been hard hit by Venezuela's trade embargo which has depressed the formers' exports significantly and will therefore no doubt be very keen to seek a resolution in the near future. Moreover, although Chávez may be hoping to shore up his weakening approval ratings by stirring patriotic sentiment, he is likely to be cognisant of the formidable risks involved of taking things further. As we have underlined previously, the asymmetry between the two countries' militaries according to the International Institute of Strategic Studies Colombia's military eclipses Venezuela's by a factor of two means that there is a veritable physical deterrent against a head-to-head battle. More significantly, domestic economic woes in Venezuela real GDP fell by 4.5% y-o-y in the third quarter and inflation remains rampant will hardly improve if Chávez were to divert already scarce resource towards a military conflict. As for the regional reaction to the present stand-off, it is clear that key powers such as Brazil are on stand-by to mediate between the two sides if things spiral of control. In sum, while it looks as though the situation could remain very tense for some time, we expect economic reality to eventually prevail, helping to restore at least some semblance of normalcy in bilateral relations.

#### Comprehensive reform fails – if it passes it has too many compromises that prevent solvency

Morrison 12-9 – Bruce Morrison, a former U.S. Representative from Connecticut, was the chairman of the House immigration subcommittee and the author of the Immigration Act of 1990. December 9th, 2012, "One Bill of Compromises Isn’t the Answer” www.nytimes.com/roomfordebate/2012/12/09/understanding-immigration-reform/one-immigration-bill-of-compromises-isnt-the-answer

To many, “comprehensive immigration reform” means “fix it and forget it.” But doing it all in one bill reprises what got us in the current mess in the first place. After major reform bills in 1986 and 1990, the failing employment verification scheme and the clogged green card process were allowed to go unattended. The “enforcement only” 1996 law only froze the mess in place.¶ Save the 'punishment' for those that do not comply with a system that works, not those ensnared in the current system that does not.¶ **A huge compromise of all competing immigration fixes larded into one bill will involve compromises that do not serve the nation’s interests.** Instead we need to assemble the votes to do the two things that must be done — a broad earned legalization program for the 11 million now illegally resident in the country in conjunction with the assurance that this problem will not happen again. That assurance will come from a universal, electronic, identity-authenticating screening of all workers to ensure that they are authorized to work in the U.S.¶ Because almost all who make unauthorized entries and overstays do so to seek and accept employment, no other tool will get the result we need to make legalization politically and philosophically justified — that we have fixed the source of the problem. And this also means using the employment relationship to roll-in legalization while rolling out universal verification.¶ The key point is that prevention of illegal presence is the goal. Save the “punishment” for those that do not comply with a system that works, not those ensnared in the current system that does not.¶ Our legal immigration system needs lots of fixing, like the increase of STEM green cards passed by the House last week and much more. But these fixes, including all future flows beyond the current one million annual immigrants and the millions who will be legalized, will get much easier to negotiate when the legalization-prevention barrier is removed.

#### Contentious gun control debates start soon and delay immigration

Weber 1/1 Joseph, "Guns, immigration, fiscal issues emerge as top priorities for Obama, new Congress", 2013, www.foxnews.com/politics/2013/01/01/gun-control-immigration-reform-fiscal-issues-emerge-as-top-issues-for-new/

Gun control could answer both of those questions. Obama and leaders of the Democrat-controlled Senate have made clear their intentions to promptly introduce legislation restricting firearms, in the aftermath of the Dec. 14 shooting at a Connecticut elementary school in which six adults and 20 first-graders were killed.¶ California Sen. Dianne Feinstein and other Democrats want to re-institute an assault-weapons ban – a plan Obama on Sunday again publicly supported. And related legislation could include proposed bans on high-capacity ammunition clips and tighter background checks for gun buyers.¶ Lawmakers have suggested over the past weeks that debates on gun control could start as early as this month and delay those on immigration reform until spring – given the political climate and the Senate Judiciary Committee having oversight on both issues.¶ However, Democrats can expect strong opposition from Republicans and the National Rifle Association, the country’s most influential gun lobby. And large-scale Second Amendment changes are not expected, even if Democrats pass legislation.

#### No vote until June – gun control and Supreme Court overshadows

Bennett 12-30 – Brian Bennett, Washington Bureau, writer for the LA Times, December 30th, 2012, "Immigration reform could get overshadowed in Congress" articles.latimes.com/2012/dec/30/nation/la-na-immigration-20121230

The tough work of hammering out a compromise over immigration in the committee would best be wrapped up by the end of June, congressional staffers said, in case one of the Supreme Court justices retires, which would set up a **high-profile and time-consuming nomination process** that could overshadow the immigration issue.

## 2AC Block

#### Congressional support for SPS

Morring 7 – Frank Morring, expert at Aviation Week & Space Technology, August 20th, 2007, “Space Solar Power: Climate, Economy, National Security Drive Another Look At SSP; Experts see warming, economic concerns and energy security as reasons to build SSP” Proquest Search

Another factor that might build support in Congress and the Executive Branch is the effect building an SSP system would have on competitiveness. "Here in the U.S. **we continue to be concerned about competitiveness**, particularly in light of the migration of many high-tech industries overseas, and how [to] provide long-term economic and science and technology strength in the U.S. [It's] an ongoing challenge," Mankins says.

#### The DOD supports SPS and shields it

Hurst 8 – executive editor and writer for ecopolitology and Cleantechnica (Timothy B. December 21, 2008, Red Green & Blue, “Will Obama Champion Space-Based Solar Power?” <http://redgreenandblue.org/2008/12/21/will-obama-champion-space-based-solar-power/>)

But there has also been some discussion that Obama could make cuts at NASA, if for no other reason than something has got to be cut somewhere. Although funding NASA may not be a top priority for Obama, a strong argument could be made that investment in SSP research program would sync with his focus on building a clean energy economy. It also helps that the idea has been supported by Defense Department officials who see SSP applications in the transmission of electricity to remote locations to support military actions. I’m not suggesting that Obama will use the cover of the Defense Departmen**t to expand solar research**, but used as part of a strategy that promotes economic growth and environmental health, it may be a strategic choice that has some political legs. Whatever political method the Obama administration uses to hammer on the clean energy agenda, it is clear that Obama’s will be a science-based administration. And as recently as yesterday, Obama reiterated that his administration would not stifle hard-to-swallow science, but nurture it. Obama said in his weekly address: “Today more than ever before science holds the key to our survival as a planet and the security and prosperity as a nation. It’s time once again that we put science at the top of our agenda and restore America’s place as the world leader in science and technology.” If that includes a robust Space-Based Solar Program, we’ll have to wait and see.

#### Winners win

Marshall and Prins 11 (BRYAN W, Miami University and BRANDON C, University of Tennessee & Howard H. Baker, Jr. Center for Public Policy, “Power or Posturing? Policy Availability and Congressional Influence on U.S. Presidential Decisions to Use Force”, Sept, Presidential Studies Quarterly 41, no. 3)

Presidents rely heavily on Congress in converting their political capital into real policy success. Policy success not only shapes the reelection prospects of presidents, but it also builds the president’s reputation for political effectiveness and fuels the prospect for subsequent gains in political capital (Light 1982). Moreover, the president’s legislative success in foreign policy is correlated with success on the domestic front. On this point, some have largely disavowed the two-presidencies distinction while others have even argued that foreign policy has become a mere extension of domestic policy (Fleisher et al. 2000; Oldfield and Wildavsky 1989) Presidents implicitly understand that there exists a linkage between their actions in one policy area and their ability to affect another. The use of force is no exception; in promoting and protecting U.S. interests abroad, presidential decisions are made with an eye toward managing political capital at home (Fordham 2002).

## Russia

#### Prices low now

The Australian – 12-28 – The Australian December 28th, 2012, "Oil prices dip on US budget deal doubts" [www.theaustralian.com.au/business/breaking-news/oil-prices-dip-on-us-budget-deal-doubts/story-e6frg90f-1226544444699](http://www.theaustralian.com.au/business/breaking-news/oil-prices-dip-on-us-budget-deal-doubts/story-e6frg90f-1226544444699)

New York's main contract, West Texas Intermediate (WTI) for February delivery, slipped 11 cents to settle at $US90.87 a barrel.¶ Brent North Sea crude for February delivery dipped 27 cents to $US110.80 a barrel in London trade.¶ With the clock ticking, the White House and Republican lawmakers have yet to reach a deal to keep the United States from falling off the so-called fiscal cliff, a combination of steep tax hikes and drastic spending cuts set to kick in next month.¶ President Barack Obama cut short his family Christmas break in Hawaii to return to Washington in a last-ditch attempt at reaching a compromise.¶ But the situation remained tense, with Senate Majority Leader Harry Reid, a Democrat, saying on Thursday "it looks like" the US economy will hurtle over the fiscal cliff because House Speaker John Boehner and Republican Minority Leader Mitch McConnell were stalling.¶ Crude oil prices were "being taken down **on what appears to be the growing eventuality that the US is going to go over the fiscal cliff**," said analyst John Kilduff of Again Capital.

#### There’s a global glut of overproduction – price crash is inevitable

Maugeri 12 – Leonardo Maugeri is currently a Research Fellow of the Geopolitics of Energy Project at the Harvard Kennedy School's Belfer Center for Science and International Affairs. Mr. Maugeri has been a Visiting Scholar at MIT (2009–2010) and a member of MIT's External Energy Advisory Board. He also serves as an International Counselor of the Center for Strategic and International Studies (Washington, D.C.) and as a member of the Global Energy Advisory Board of Accenture, and he is a senior fellow of the Foreign Policy Association (New York). June 2012, "Oil: The Next Revolution" belfercenter.ksg.harvard.edu/files/Oil-%20The%20Next%20Revolution.pdf

Contrary to what most people believe, oil supply capacity is growing worldwide at such an unprecedented level that it might outpace consumption. This could lead to a glut of overproduction and a steep dip in oil prices.¶ Based on original, bottom-up, field-by-field analysis of most oil exploration and development projects in the world, this paper suggests that an unrestricted, **additional** production (the level of production targeted by each single project, according to its schedule, unadjusted for risk) of more than 49 million barrels per day of oil (crude oil and natural gas liquids, or NGLs) is targeted for 2020, the equivalent of more than half the current world production capacity of 93 mbd. ¶ After adjusting this substantial figure considering the risk factors affecting the actual accomplishment of the projects on a country-by-country basis, the additional production that could come by 2020 is about 29 mbd. Factoring in depletion rates of currently producing oilfields and their “reserve growth” (the estimated increases in crude oil, natural gas, and natural gas liquids that could be added to existing reserves through extension, revision, improved recovery efficiency, and the discovery of new pools or reservoirs), the net additional production capacity by 2020 could be 17.6 mbd, yielding a world oil production capacity of 110.6 mbd by that date – as shown in Figure 1. This would represent the **most significant increase in any decade since the 1980s.**

#### No economy impact

Goodrich and Zeihan 9 [Lauren Goodrich, Stratfor's Director of Analysis and Senior Eurasia analyst, and Peter Zeihan, Vice President of Analysis at Stratfor, “The Financial Crisis and the Six Pillars of Russian Strength,” March 3 2009, <http://www.stratfor.com/weekly/20090302_financial_crisis_and_six_pillars_russian_strength>]

Thus, while Russia's financial sector may be getting torn apart, the state does not really count on that sector for domestic cohesion or stability, or for projecting power abroad. Russia knows it lacks a good track record financially, so it depends on -- and has shored up where it can -- six other pillars to maintain its (self-proclaimed) place as a major international player. The current financial crisis would crush the last five pillars for any other state, but in Russia, it has only served to strengthen these bases. Over the past few years, there was a certain window of opportunity for Russia to resurge while Washington was preoccupied with wars in Iraq and Afghanistan. This window has been kept open longer by the West's lack of worry over the Russian resurgence given the financial crisis. But others closer to the Russian border understand that Moscow has many tools more potent than finance with which to continue reasserting itself.

#### Diversification solves aggression and political reforms

Cohen & Ericson 9 – Ariel Cohen, Ph.D., Senior Research Fellow, The Kathryn and Shelby Cullom Davis Institute for International Studies, AND\*\*\* Richard Ericson, Ph.D., Chair of the Department of Economics at the East Carolina University and former Director of the Harriman Institute at Columbia University, November 2nd, 2009, The Heritage Foundation, “Russia's Economic Crisis and U.S.-Russia Relations: Troubled Times Ahead,” <http://www.heritage.org/research/reports/2009/11/russias-economic-crisis-and-us-russia-relations-troubled-times-ahead>

An economic model based on natural resources would tend to perpetuate authoritarianism, nationalism, and corruption, and it would require Russia to follow a neo-imperial policy throughout the Commonwealth of Independent States (CIS) to support Russian domination of the pipeline system. In a way, the petrostate model and the associated militarized foreign policy require Russia to label the U.S. as an enemy. A more open and diversified economy would be more compatible with democratization and the rule of law**.** Russia's falling economic performance has dampened some aspects of the revisionist rhetoric, but has not drastically changed Russia's foreign policy narrative, which remains decidedly anti-status quo and implicitly anti-American. Recent increases in oil prices ensure the continuation of this policy. Even during the current crisis, Russia has continued to voice strong grievances against the West and made revisionist demands to change key international economic and European security institutions for its benefit. Unless the Kremlin significantly reorients its foreign and security policy priorities, the Obama Administration's attempt to "reset" U.S.-Russian relations may fail. Only a coherent policy by the Obama Administration and Congress can force the Russian leadership to realize that they would be better served by cooperating with the U.S. and the West than by subverting it. The Russian Petrostate Rollercoaster In the 1990s, the Russian economy struggled with a difficult transition from central planning to a market economy under Boris Yeltsin. In the current decade, wealth from raw materials has fueled an increasingly revisionist foreign policy. Yet while the Russian elite views Russia as a great energy and military power, its economic productivity is only one-third of U.S. productivity,[4] and its gross domestic product (GDP) is between $1.1 trillion and $1.8 trillion, depending on oil prices, and is smaller than the GDPs of France, Italy, and the U.K. From 2000 to 2008, the Kremlin benefited from rising oil prices. Prime Minister Vladimir Putin's popularity soared as Russia entered a period of intense economic growth. By 2008, Russia had become one of the 10 largest economies in the world. In only 10 years, its GDP had increased by more than eightfold (measured in U.S. dollars), having grown at an average annual rate of around 7 percent in constant rubles.[5] Real wages increased significantly, from $62 in 1999 to $529 in 2007.[6] Russia had the best stock market performance of any emerging markets during this time.[7] This economic growth occurred despite the Kremlin's efforts, beginning in 2003, to renationalize much of Russia's natural resources and other strategic sectors of the economy. In 2003, the Kremlin took control of YUKOS, the largest publicly traded Russian oil company, and jailed its owner Mikhail Khodorkovsky. During Putin's second presidential term, the Kremlin's international rhetoric and actions became increasingly assertive, even aggressive. The euphoria surrounding Russia as the "hottest new emerging market" and the considerable increase in living standards have obscured the fact that the economy lacks a diversified base and heavily depends on energy exports. (See Table 2.) Russia suffers from desperately weak rule of law, including property rights and corporate and state governance.[8] Its economy is not technologically competitive, labor costs are high, productivity is low, and foreign direct investment is stunted by state corruption and the lack of the rule of law.

#### Aggression goes nuclear

Blank 9 – Dr. Stephen Blank is a Research Professor of National Security Affairs at the Strategic Studies Institute of the U.S. Army War College, March 2009, “Russia And Arms Control: Are There Opportunities For The Obama Administration?” http://www.strategicstudiesinstitute.army.mil/pdffiles/pub908.pdf

Proliferators or nuclear states like China and Russia can then deter regional or intercontinental attacks either by denial or by threat of retaliation.168 Given a multipolar world structure with little ideological rivalry among major powers, it is unlikely that they will go to war with each other. Rather, like Russia, they will strive for exclusive hegemony in their own “sphere of influence” and use nuclear instruments towards that end. However, wars may well break out between major powers and weaker “peripheral” states or between peripheral and semiperipheral states given their lack of domestic legitimacy, the absence of the means of crisis prevention, the visible absence of crisis management mechanisms, and their strategic calculation that asymmetric wars might give them the victory or respite they need.169 Simultaneously,¶ The states of periphery and semiperiphery have far more opportunities for political maneuvering. Since war remains a political option, these states may find it convenient to exercise their military power as a means for achieving political objectives. Thus international crises may increase in number. This has two important implications for the use of WMD**.** First, they may be used deliberately to offer a decisive victory (or in Russia’s case, to achieve “intra-war escalation control”—author170) to the striker, or for defensive purposes when imbalances in military capabilities are significant; and second, crises increase the possibilities of inadvertent or accidental wars involving WMD.171¶ Obviously nuclear proliferators or states that are expanding their nuclear arsenals like Russia can exercise a great influence upon world politics if they chose to defy the prevailing consensus and use their weapons not as defensive weapons, as has been commonly thought, but as offensive weapons to threaten other states and deter nuclear powers. Their decision to go either for cooperative security and strengthened international military-political norms of action, or for individual national “egotism” will critically affect world politics. For, as Roberts observes,¶ But if they drift away from those efforts [to bring about more cooperative security], the consequences could be profound. At the very least, the effective functioning of inherited mechanisms of world order, such as the special responsibility of the “great powers” in the management of the interstate system, especially problems of armed aggression, under the aegis of collective security, could be significantly impaired. Armed with the ability to defeat an intervention, or impose substantial costs in blood or money on an intervening force or the populaces of the nations marshaling that force, the newly empowered tier could bring an end to collective security operations, undermine the credibility of alliance commitments by the great powers, [undermine guarantees of extended deterrence by them to threatened nations and states] extend alliances of their own, and perhaps make wars of aggression on their neighbors or their own people.172

#### Political reforms solve stability

Freeland and Gutterman 12 – Chrystia Freeland and Steve Gutterman, writers for Reuters, January 17, 2012, “Russia faces violent revolution if it doesn’t embrace democracy, billionaire Putin challenger declares”, http://news.nationalpost.com/2012/01/17/russia-faces-violent-revolution-if-it-doesnt-embrace-democracy-billionaire-putin-challenger-declares/

MOSCOW — Mikhail Prokhorov, a super-rich tycoon challenging Vladimir Putin for Russia’s presidency in March, said his country faced the danger of violent revolution if it did not break conservative resistance and move quickly to democracy.¶ Prokhorov, a billionaire bachelor long seen more as playboy than politician, told The Freeland File on reuters.com Russians had shaken off a post-Soviet apathy and were now “just crazy about politics.” He denied accusations he was a Kremlin tool, let into the race to split the opposition and lend democratic legitimacy to a vote Putin seems almost certain to win.¶ Putin is seeking to return to the Kremlin and rule until at least 2018, but protests against alleged fraud in a December 4 parliamentary vote have exposed growing discontent with the system he has dominated for 12 years.¶ “What worked before does not work now. Look in the streets. People are not happy,” Prokhorov, 46, said in the interview beneath the windowed dome that soars above his spacious office on a central Moscow boulevard close to the Kremlin.¶ “It is time to change,” said Prokhorov, ranked by Forbes magazine as Russia’s third-richest person, with an $18-billion metals-to-banking empire that includes the New Jersey Nets basketball team in the United States.¶ “Stability at any price is no longer acceptable for Russians.”¶ But Prokhorov made clear he considers revolution equally unacceptable for a country with grim memories of a century of hardship, war and upheaval starting with Vladimir Lenin’s 1917 Bolshevik Revolution, instead calling for “very fast evolution.”¶ “I am against any revolution, because I know the history of Russia. Every time we have revolution, it was a very bloody period,” he said.¶ The son of a Soviet sports official, Prokhorov has a basketball player’s 204-cm (6-foot-8) frame, a narrow face and a head of short-cut hair graying around the edges. In a dark suit and blue shirt that looked modest for a¶ Russian tycoon, he sat straight and spoke in English.¶ Public political consciousness is on the rise after years of apathy. The Soviet mentality is fading as a generation of Russians who “don’t know who Lenin was” grows up, he said. The country was finally ripe for change.¶ “We now have all the pieces in place to move very fast to being a real democracy,” Prokhorov said.¶ But he suggested there was a mounting battle in the ruling elite between liberals like himself and conservatives “ready to pay any price” to maintain the status quo. Russia, he said, could face a bloody revolution if opponents of reform prevail.¶ “If there are no changes in Russia, from day to day this risk will increase,” Prokhorov said. “Because 15, 20 percent of the population, the most active ones living in the big cities, want to live in a democratic country.”

#### Nuclear war

Pry 99 (Peter Vincent, Former US Intelligence Operative, War Scare: U.S.-Russia on the Nuclear Brink, netlibrary)

Russian internal troubles—such as a leadership crisis, coup, or civil war—could aggravate Russia’s fears of foreign aggression and lead to a miscalculation of U.S. intentions and to nuclear overreaction. While this may sound like a complicated and improbable chain of events, Russia’s story in the 1990s is one long series of domestic crises that have all too often been the source of nuclear close calls. The war scares of August 1991 and October 1993 arose out of coup attempts. The civil war in Chechnya caused a leadership crisis in Moscow, which contributed to the nuclear false alarm during Norway’s launch of a meteorological rocket in January 1995. Nuclear war arising from Russian domestic crises is a threat the West did not face, or at least faced to a much lesser extent, during the Cold War. The Russian military’s continued fixation on surprise-attack scenarios into the 1990s, combined with Russia’s deepening internal problems, has created a situation in which the United States might find itself the victim of a preemptive strike for no other reason than a war scare born of Russian domestic troubles. At least in nuclear confrontations of the 1950s–1970s—during the Berlin crisis, Cuban missile crisis, and 1973 Middle East war—both sides knew they were on the nuclear brink. There was opportunity to avoid conflict through negotiation or deescalation. The nuclear war scares of the 1980s and 1990s have been one-sided Russian affairs, with the West ignorant that it was in grave peril.

#### Soft power prevents extinction

Stanley 7—Elizabeth Stanley, Ph.D. is an Assistant Professor of Security Studies in the Edmund A. Walsh School of Foreign Service and the Department of Government, 7 “International Perceptions of US Nuclear Policy” Sandia Report,<http://www.prod.sandia.gov/cgi-bin/techlib/access-control.pl/2007/070903.pdf>

How important is soft power, anyway?  Given its vast conventional military power, does  the United States even need soft power?  Some analysts argue that US military predominance is both possible and desirable over the long term, and thus soft power is not important.  But a growing consensus disagrees.  These analysts argue that soft power is critical for four reasons.   First, soft power is invaluable for keeping potential adversaries from gaining international  support, for “winning the peace” in Afghanistan and Iraq, and for convincing moderates to  refrain from supporting extremist terrorist groups.  Second, soft power helps influence neutral  and developing states to support US global leadership.  Third, soft power is also important for  convincing allies and partners to share the international security burden.14  Finally, and perhaps  most importantly, given the increasing interdependence and globalization of the world system,  soft power is critical for addressing most security threats the United States faces today.  Most  global security threats are impossible to be countered by a single state alone.  Terrorism,  weapons of mass destruction (WMD) proliferation, failed and failing states, conflicts over access  to resources, are not confined to any one state.  In addition, disease, demographic shifts,  environmental degradation and global warming will have negative security implications as  well.15  All of these potential threats share four traits: (1) they are best addressed proactively,  rather than after they develop into full-blown crises; (2) they require multi-lateral approaches,  often under the umbrella of an international institution; (3) they are not candidates for a quick  fix, but rather require multi-year, or multi-decade solutions; and, (4) they are “wicked” problems.   Given these four traits, soft power is critical for helping to secure the international, multi-lateral  cooperation that will be necessary to address such threats effectively.

# 1AR

## Case

**Status quo military alternative energy isn't sufficient - wasn't a lot of money and the Pentagon wasn't ready for it**

**Snider 10/20** (Annie, Environment and Energy Daily Writer, " RENEWABLE ENERGY: Haste made waste as DOD dashed to tap stimulus for green projects," 2011, http://www.eenews.net/public/Greenwire/2011/10/20/1, EMM)

The Defense Department spent more than $117 million of stimulus funds on hastily planned renewable energy projects that promised lackluster returns on investments and now face major delays -- if they're built at all, according to a Greenwire review of DOD inspector general audits and other documents on the projects. Consider the Air Force's $14.1 million plan to build three wind turbines at radar stations in Alaska. The service bulled ahead without fully assessing the potential for wind at the turbine sites, the IG found. Now, one turbine is scheduled for cancellation because of "sporadic" wind at its proposed location. Meanwhile, the two other turbines are moving ahead with weak return-on-investment numbers that fail to meet DOD standards -- they are likely to take more than 15 years to pay for themselves -- the audit found. Such tainted projects have gobbled up more than a third of the $335.7 million that the stimulus provided for renewable power efforts at military bases, the IG reports say. Those findings don't surprise officials with experience in DOD energy ventures. "Energy programs never had that kind of money before, and suddenly this huge deluge of money comes in," said retired Army Col. Dan Nolan, who is now CEO of the energy security company Sabot 6. "If you want it bad, you get it bad. And that's exactly what happened, because people didn't have time to go through the processes you normally would."

## K

#### Preventing death is the first ethical priority – it’s the only impact you can’t recover from.

Zygmunt **Bauman,** University of Leeds Professor Emeritus of Sociology, 1995, Life In Fragments: Essays In Postmodern Morality, p. 66-71

The being‑for is like living towards‑the‑future: a being filled with anticipation, a being aware of the abyss between future foretold and future that will eventually be; it is this gap which, like a magnet, draws the self towards the Other,as it draws life towards the future, making life into an activity of overcoming, transcending, leaving behind. The self stretches towards the Other, as life stretches towards the future; neither can grasp what it stretches toward, but it is in this hopeful and desperate, never conclusive and never abandoned stretching‑toward that the self is ever anew created and life ever anew lived. In the words of M. M. Bakhtin, it is only in this not‑yet accomplished world of anticipation and trial, leaning toward stubbornly an‑other Other, that life can be lived ‑ not in the world of the `events that occurred'; in the latter world, `it is impossible to live, to act responsibly; in it, I am not needed, in principle I am not there at all." Art, the Other, the future: what unites them, what makes them into three words vainly trying to grasp the same mystery, is the modality of possibility. A curious modality, at home neither in ontology nor epistemology; itself, like that which it tries to catch in its net, `always outside', forever `otherwise than being'. The possibility we are talking about here is not the all‑too‑familiar unsure‑of‑itself, and through that uncertainty flawed, inferior and incomplete being, disdainfully dismissed by triumphant existence as `mere possibility', `just a possibility'; possibility is instead `plus que la reahte' ‑ both the origin and the foundation of being. The hope, says Blanchot, proclaims the possibility of that which evades the possible; `in its limit, this is the hope of the bond recaptured where it is now lost."' The hope is always the hope of *being fu filled,* but what keeps the hope alive and so keeps the being open and on the move is precisely its *unfu filment.* One may say that the paradox *of hope* (and the paradox of possibility founded in hope) is that it may pursue its destination solely through betraying its nature; the most exuberant of energies expends itself in the urge towards rest. Possibility uses up its openness in search of closure. Its image of the better being is its own impoverishment . . . The togetherness of the being‑for is cut out of the same block; it shares in the paradoxical lot of all possibility. It lasts as long as it is unfulfilled, yet it uses itself up in never ending effort of fulfilment, of recapturing the bond, making it tight and immune to all future temptations. In an important, perhaps decisive sense, it is selfdestructive and self‑defeating: its triumph is its death. The Other, like restless and unpredictable art, like the future itself, is a *mystery.* And being‑for‑the‑Other, going towards the Other through the twisted and rocky gorge of affection, brings that mystery into view ‑ makes it into a challenge. That mystery is what has triggered the sentiment in the first place ‑ but cracking that mystery is what the resulting movement is about. The mystery must be unpacked so that the being‑for may focus on the Other: one needs to know what to focus on. (The `demand' is *unspoken,* the responsibility undertaken is *unconditional;* it is up to him or her who follows the demand and takes up the responsibility to decide what the following of that demand and carrying out of that responsibility means in practical terms.) Mystery ‑ noted Max Frisch ‑ (and the Other is a mystery), is an exciting puzzle, but one tends to get tired of that excitement. `And so one creates for oneself an image. This is a loveless act, the betrayal." Creating an image of the Other leads to the substitution of the image for the Other; the Other is now fixed ‑ soothingly and comfortingly. There is nothing to be excited about anymore. I know what the Other needs, I know where my responsibility starts and ends. Whatever the Other may now do will be taken down and used against him. What used to be received as an exciting surprise now looks more like perversion; what used to be adored as exhilarating creativity now feels like wicked levity. Thanatos has taken over from Eros, and the excitement of the ungraspable turned into the dullness and tedium of the grasped. But, as Gyorgy Lukacs observed, `everything one person may know about another is only expectation, only potentiality, only wish or fear, acquiring reality only as a result of what happens later, and this reality, too, dissolves straightaway into potentialities'. Only death, with its finality and irreversibility, puts an end to the musical‑chairs game of the real and the potential ‑ it once and for all closes the embrace of togetherness which was before invitingly open and tempted the lonely self." `Creating an image' is the dress rehearsal of that death. But creating an image is the inner urge, the constant temptation, the *must* of all affection . . . It is the loneliness of being abandoned to an unresolvable ambivalence and an unanchored and formless sentiment which sets in motion the togetherness of being‑for. But what loneliness seeks in togetherness is an end to its present condition ‑ an end to itself. Without knowing ‑ without being capable of knowing ‑ that the hope to replace the vexing loneliness with togetherness is founded solely on its own unfulfilment, and that once loneliness is no more, the togetherness ( the being‑for togetherness) must also collapse, as it cannot survive its own completion. What the loneliness seeks in togetherness (suicidally for its own cravings) is the foreclosing and pre‑empting of the future, cancelling the future before it comes, robbing it of mystery but also of the possibility with which it is pregnant. Unknowingly yet necessarily, it seeks it all to its own detriment, since the success (if there is a success) may only bring it back to where it started and to the condition which prompted it to start on the journey in the first place. The togetherness of being‑for is always in the future, and nowhere else. It is no more once the self proclaims: `I have arrived', `I have done it', `I fulfilled my duty.' The being‑for starts from the realization of the bottomlessness of the task, and ends with the declaration that the infinity has been exhausted. This is the tragedy of being‑for ‑ the reason why it cannot but be death‑bound while simultaneously remaining an undying attraction. In this tragedy, there are many happy moments, but no happy end. Death is always the foreclosure of possibilities, and it comes eventually in its own time, even if not brought forward by the impatience of love. The catch is to direct the affection to staving off the end, and to do this against the affection's nature. What follows is that, if moral relationship is grounded in the being-for togetherness (as it is), then it can exist as a project, and guide the self's conduct only as long as its nature of a project (a not yet-completed project) is not denied. Morality, like the future itself, is forever not‑yet. (And this is why the ethical code, any ethical code, the more so the more perfect it is by its own standards, supports morality the way the rope supports the hanged man.) It is because of our loneliness that we crave togetherness. It is because of our loneliness that we open up to the Other and allow the Other to open up to us. It is because of our loneliness (which is only belied, not overcome, by the hubbub of the being‑with) that we turn into moral selves. And it is only through allowing the togetherness its possibilities which only the future can disclose that we stand a chance of acting morally, and sometimes even of being good, in the present.

#### The plan is natural capitalism - it's sustainable

Hawken et al 10 (Paul, environmentalist, entrepreneur, and author, Amory B. Lovins, Co-founder, Chairman, and Chief Scientist of Rocky Mountain Institute, and L. Hunter Lovins, founder of Natural Capitalism, Inc. and Natural Capitalism Solutions and co-founder of the Rocky Mountain Institute and a professor at the Presidio School of Management's MBA in Sustainable Management program, “Natural Capitalism: The Next Industrial Revolution”, Google Books, p. 259-262)

CHURCHILL ONCE REMARKED THAT DEMOCRACY IS THE WORST SYSTEM OF government — except for all the rest. The same might be said of the market economy. Markets are extremely good at what they do, harnessing such potent motives as greed and envy — indeed, Lewis Mum ford said, all the Seven Deadly Sins except sloth. Markets are so successful that they are often the vehicle for runaway, indiscriminate growth, including the growth that degrades natural capital.¶ A common response to the misuse, abuse, or misdirection of market forces is to call for a retreat from capitalism and a return to heavy-handed regulation. But in addressing these problems, natural capitalism does not aim to discard market economics, nor reject its valid and important principles or its powerful mechanisms. It does suggest that we should vigorously employ markets for their proper purpose as a tool for solving the problems we face, while better understanding markets' boundaries and limitations.¶ Democracies require ceaseless political vigilance and informed citizenship to prevent them from being subverted or distorted by those who wish to turn them to other ends. Markets, too, demand a comparable degree of responsible citizenship to keep them functioning properly despite those who would benefit more from having them work improperly. But the success of markets when they do work well is worth the effort. Their ingenuity, their rapid feedback, and their diverse, dispersed, resourceful, highly motivated agents give markets unrivaled effectiveness. Many of the excesses of markets can be compensated for by steering their immense forces in more creative and constructive directions. What is required is diligence to under-stand when and where markets are dysfunctional or misapplied, and to choose the correct targeted actions to help them to operate better while retaining their vigor and vitality.¶ This book has often argued that most of the earth’s capital, which makes life and economic activity possible, has not been accounted for by conventional economics. The goal of natural capitalism is to extend the sound principles of the market to all sources of material value, not just to those that by accidents of history were first appropriated into the market system. It also seeks to guarantee that all forms of capital are as prudently stewarded as money is by the trustees of financial capital.¶ The notion that much of the remedy for unsustainable market activities is the adoption of sustainable market activities may offend both those who deny that markets can be unsustainable and those who deny that markets and profits can be moral. Yet worldwide experience confirms an abundance of market-based tools whose outcomes can be environmentally, economically, and ethically superior. These tools include institutional innovations that can create new markets in avoided resource depletion and abated pollution, maximize competition in saving resources, and convert the cost of a sulfur tax or a carbon-trading price into profits realized from the sale and use of efficient technologies.

#### No epistemology problems

Norton 5 (Bryan G, professor of philosophy at the Georgia Institute of Technology, “Sustainability: A Philosophy of Adaptive Ecosystem Management”, University of Chicago Press, November 1, 2005, pp. 151-154)

In open public debate and open public processes, when well-informed stakeholders have free access to information and to political institutions, diverse members of a community will have an incentive to identify weaknesses—scientific, economic, and moral—in policies proposed by competing groups. If a process can be created that mimics the process the repairmen on Neuraths boat must develop if they are to survive, then we can give up the dry dock of a priori, self-evident truths and trust science and the observational method, especially if empowered by a strong sense of shared community values, to identify weak planks and keep the boat afloat. So a reasonable way to proceed, in an adaptive management framework, is to inspire stakeholders and participants to challenge and question both the beliefs of science and the proposed goals and values. Democracy, in this sense, can be a powerful engine of truth-seeking. A diverse population, in adaptive management as well as in Darwinian evolution, increases adaptability, by exploring a variety of available options, winnowing out the weak assumptions, and pursuing the most justifiable goals within a particular situation.¶ Provided Neuraths analogy is apt, we can proceed with our analysis, having established a crucial role for values in our epistemological choices; now we turn our attention to improving our understanding of, and language for describing, environmental values. We want to understand environmental values theoretically. As adaptive managers, however, we are also interested in the way they function in a process of local, community-based experimental management. So far I have emphasized the practical costs of not having at our disposal a coherent and intelligible language, and an associated explanatory theory, for discussing environmental values and policy. These practical difficulties were symbolized by the crooked corridors at EPA; and none of EPA's corridors of communication are more crooked and blocked than those through which information about environmental values and goals should flow.¶ One important requirement of straightened corridors of communication is the creation of an integrative language that allows cross-disciplinary and cross-interest-group communication. So one task is to develop some clearer ways of talking about environmental values, relating them to the statements of disciplinary and integrative sciences, and—most importantly and most practically—creating an enlightening, integrative discourse about environmental science, values, and policy goals. If we are to go beyond simply improving communication, however, and move toward substantive agreements about what to do to protect resources and live sustainably, we must also provide a theoretical structure that connects the ideal of sustainability to justifiable environmental policy goals that can be operationalized, goals that can be stated and pursued in real-life communities with real-life problems. The purpose of this part of the book is two-fold: to improve our linguistic tools for communication about environmental values and to offer the broad outlines of a positive theory of environmental values.¶ Pragmatists, from Peirce to Leopold, and adaptive managers are not anti-theory; they are; however, very wary of theory cut loose from possible observation. No beliefs are ultimately immune from revision in the face of experience; all theory must sooner or later stand the test of experience, which helps us to separate truth from falsehood and nonsense. This generalization applies to theories of environmental value no less than to empirical hypotheses about causal factors. The goal of such a process is to create theory as a general reflection of experience and to avoid a priori theory invoked to dictate the general shape of any environmental values. By testing proposed theories against their performance in articulating, clarifying, and justifying real environmental goals of real communities, we gradually hone a language that will help communities in the future to ask the right questions and to improve their chances of achieving meaningful improvements in their policies.

## Immigration

### Debt-Ceiling + Gun Control Thumpers

#### Debt ceiling thumps---pretty intuitive argument---the deadline is February which means fights will happen immediately---immigrationwon’t come up till June---that’s Bennett---even if deal I/E they still fight over what it contains. New ev is justifies because of slew of new UQ warrants he makes.

#### Budget fights outweigh---consumes the first half of 2013

Helderman 1/1 Rosalind S, "After a 'fiscal cliff' deal, what next?", 2013, www.washingtonpost.com/politics/after-a-fiscal-cliff-deal-what-next/2012/12/31/b9d9a452-5384-11e2-bf3e-76c0a789346f\_story.html?wprss=rss\_politics

Assuming the deal is approved by the House, it will nevertheless give way to a nearly continuous series of fights that will consume the first part of the year, even as President Obama might hope to shift Congress’s attention to immigration reform and gun control.¶ “It’s become less like a fiscal cliffhanger and more like a journey over the fiscal mountains,” said Rep. Jeff Fortenberry (R-Neb.).¶ The next big deadline is likely to come around the end of February, when the Treasury Department will exhaust the measures now in place to extend the nation’s $16.4 trillion debt ceiling. At that point, the government will not be able to pay its bills unless Congress votes to raise the nation’s legal borrowing limit.¶ Republicans hope to use that moment to force Obama and congressional Democrats to agree to major spending cuts in return for the increase — in what could be a sequel to the contentious face-off over the debt limit in the summer of 2011.¶ Provided Monday’s deal is approved, in early March would come another deadline: the $110 billion cut in spending, half from the Pentagon, delayed as part of this deal.¶ A month or so later — on March 27 — a short-term measure that funds government agencies will lapse. Without a renewal, the government will shut down, setting up another possible showdown.¶ “Round two’s coming,” said Sen. Lindsey O. Graham (R-S.C.). “And we’re going to have one hell of a contest about the direction and the vision of this country.”¶ Many Republicans believe they’ll have more leverage then than they do now because the debate over tax rates on the wealthy will be settled.

#### Debt ceiling’s the only thing that matters---requires all of Obama’s PC

John Feehery 1-2, President of Communications and Director of Government Affairs for Quinn Gillespie and Associates, 1/2/13, “The Clock,” <http://www.thefeeherytheory.com/2013/01/02/the-clock/>

The small tax agreement passed by the House last night makes it harder for Obama to do other things with his time in the White House. ¶ That is the inevitable truth that seems lost on conservatives who opposed a deal to make permanent 98% of the Bush tax cuts. ¶ Mitch McConnell is a master at clock management, and as minority leader, his job is to make it as hard as possible for the President to enact his left-wing agenda. ¶ As I wrote yesterday, McConnell was the master strategist who decided that the Congress would deal first with taxes and then with spending. ¶ Conservative leaders (well, the ones most desperate to raise money attacking Republicans) are professionally apoplectic. They can’t believe that Republicans didn’t get any spending cuts included in this deal, after they torpedoed John Boehner’s plan which included massive spending cuts and popular tax provisions. ¶ But Plan C wasn’t designed to include spending cuts, you blithering idiots. That comes later, in the fight over the debt limit. ¶ The President has already declared that the debt limit is off the table, but of course, we all know that **he is posturing. Nothing is off the table**, and the fact of the matter is that Republicans need to come up with substantial spending cuts if they are to gain the respect of their political base. ¶ After the fight on the debt limit will come a fight on sequester. After the fight on the sequester will come a fight on the 2013 Appropriations bills. ¶ All of these fights will take the time and attention of the President himself. All of these fights will take political capital and energy and promises. By focusing on the budget issues, Republicans make it harder for the President to focus on other things, like immigration and gun control, and whatever crazy left-wing agenda items he might want to add to the list. ¶ Imagine if last night, the grand bargain came together, and Republicans and Democrats cleared up everything in one vote. The President wouldn’t have high-fived the Speaker and said, “my job is done here.” ¶ He would have moved on to gun control. He can’t do that now. Now he has to talk exclusively about the debt limit. He has to burn up political capital on an issue that dove-tails quite nicely with out-of-control spending. ¶ The clock is running out on the Obama White House, and the more time we talk about fiscal issues, the less time he has to get his left-wing agenda through the Congress.

#### Gun control also thumps---that’s Bennett and Weber---it’ll be a huge fight that consumes Obama---our ev makes a sequencing claim that it will happen before immigration.

#### Gun control wrecks political capital he IS pushing

Kogan 12-27-12, Mark, Dianne Feinstein Assault Weapons Ban is Political Suicide For Democrats, http://www.policymic.com/articles/21525/dianne-feinstein-assault-weapons-ban-is-political-suicide-for-democrats

In the wake of the Sandy Hook Elementary shooting, gun control — and the wider Second Amendment debate — is expected to remain a simmering topic both in national discourse and for politicians to address. ¶ After a year filled with a number of high-profile mass shootings ranging from the Oak Creek, Wisc., Sikh Temple shooting to the Aurora, Colo., theater massacre and most recently the wholesale slaughter of children at Sandy Creek Elementary in Newtown, Conn. and shooting of volunteer firefights in Webster, NY, some political movement and action is inevitable.¶ The NRA has been the biggest conservative voice in the debate, advocating for increased armed security in schools and public places, a “more guns for the good guys” theory which I soundly rejected last week as the misguided ravings of a lobby thoroughly in the pocket of gun manufacturers rather than American citizens.¶ On the left, the response has been somewhat more muted and disjointed. President Obama established a commission chaired by Vice President Joe Biden to look into the issue of gun control and promised action. On the congressional side, California Senator Dianne Feinstein committed to bringing a new assault weapon ban to the Senate at the start of the next Congress.¶ Senator Feinstein has posted a preview of the bill on her website. If the final language of the law actually says what that summary claims, the Democrats are in for a political blowout that will do nothing to advance the ball on meaningful gun control **while costing them untold political capital.**

#### If they win it’s still passing post-these that proves either PC doesn’t’ spillover or winners win fast

### Won’t Pass

#### Morrison---it’ll be piecemeal

### Link Shield

#### None of their ev assumes SPS or a prizes mechanism---means don’t link to Solyndra

#### Congressional support for SPS

Morring 7 – Frank Morring, expert at Aviation Week & Space Technology, August 20th, 2007, “Space Solar Power: Climate, Economy, National Security Drive Another Look At SSP; Experts see warming, economic concerns and energy security as reasons to build SSP” Proquest Search

Another factor that might build support in Congress and the Executive Branch is the effect building an SSP system would have on competitiveness. "Here in the U.S. **we continue to be concerned about competitiveness**, particularly in light of the migration of many high-tech industries overseas, and how [to] provide long-term economic and science and technology strength in the U.S. [It's] an ongoing challenge," Mankins says.

#### The DOD supports SPS and shields it

Hurst 8 – executive editor and writer for ecopolitology and Cleantechnica (Timothy B. December 21, 2008, Red Green & Blue, “Will Obama Champion Space-Based Solar Power?” <http://redgreenandblue.org/2008/12/21/will-obama-champion-space-based-solar-power/>)

But there has also been some discussion that Obama could make cuts at NASA, if for no other reason than something has got to be cut somewhere. Although funding NASA may not be a top priority for Obama, a strong argument could be made that investment in SSP research program would sync with his focus on building a clean energy economy. It also helps that the idea has been supported by Defense Department officials who see SSP applications in the transmission of electricity to remote locations to support military actions. I’m not suggesting that Obama will use the cover of the Defense Departmen**t to expand solar research**, but used as part of a strategy that promotes economic growth and environmental health, it may be a strategic choice that has some political legs. Whatever political method the Obama administration uses to hammer on the clean energy agenda, it is clear that Obama’s will be a science-based administration. And as recently as yesterday, Obama reiterated that his administration would not stifle hard-to-swallow science, but nurture it. Obama said in his weekly address: “Today more than ever before science holds the key to our survival as a planet and the security and prosperity as a nation. It’s time once again that we put science at the top of our agenda and restore America’s place as the world leader in science and technology.” If that includes a robust Space-Based Solar Program, we’ll have to wait and see.

#### Prizes are popular in Congress

Moree 12 – Chief Executive Officer of BIO Ventures for Global Health, Melinda; “A Prize to Save Lives”, <http://www.huffingtonpost.com/melinda-moree/a-prize-to-save-lives_b_896283.html>

Say the word 'prize,' and most people think of gold medals, blue ribbons and carnival games. But prizes are not just for country fairs. Throughout history, prizes have solved some of the world's toughest scientific and technological challenges. In 1765, a clockmaker won a £10,000 prize when he invented a way to measure longitude at sea. Nearly 250 years later, a team of inventors won a $10 million 'X-Prize' when they developed a commercial spacecraft. In our troubled economic times, there has been **growing interest** in prizes as a powerful, cost-effective way to stimulate innovation. The Obama administration and Congress are taking a closer look at prizes after passing last year's America COMPETES legislation, which empowers federal agencies to conduct prize competitions. Already agencies have presented dozens of challenges to the public, including a $15 million prize to develop high-efficiency light bulbs to replace the incandescent bulb and a $10 million prize to produce vehicles that exceed 100 miles-per-gallon. Even Google has gotten into the game with prizes.org -- a new website where users can post open contests to create the best workout plans or the most exciting travel itineraries, with cash as the prize. Now, it's time to launch a prize to save lives. Almost 4 million children in developing countries die each year from infectious diseases, largely because the drugs, vaccines and diagnostic tests that could save their lives don't yet exist. If these diseases affected children living in the U.S. or Europe, the commercial marketplace would snap to action. But the marketplace often fails to deliver solutions for children who live in poor countries. As foreign aid budgets shrink, prizes can offer an efficient solution by stimulating private sector investment in global health. Such market-based prizes can also draw new ideas from unexpected quarters -- like the biotech sector. Some of the brightest scientific minds in the biotech industry gathered at the BIO International Convention last week in Washington, D.C. Biotech companies have transformed health with cutting-edge scientific innovations. Imagine if these companies spent as much time and resources finding solutions to malaria and pneumonia as they do for cancer and human growth hormones. At the convention, I heard from leaders of companies who were seeking ways to engage in global health. But smaller biotech companies often do not have the resources to invest significant capital in global health products with uncertain markets. Why would a biotech in San Francisco develop a product for a patient in Nairobi who could never afford it? High-risk, low-reward ventures, however philanthropic, do not make good business. The problem is a lack of incentives. A prize might be just the ticket. Prizes can be even more effective than traditional global health funding mechanisms, like grants and product development partnerships, which are non-profit organizations that work to develop treatments for neglected diseases through public-private arrangements. Grant funding is not results-driven. Donors have to pay upfront, regardless of whether results are achieved. A prize would allow leading donors to invest their money in a competition that would entice a range of companies to develop a product that meets a specific need -- for example, a diagnostic test that could accurately diagnose five or six common diseases in developing countries, including leading killers of children like malaria and pneumonia. There is urgent need for such a test; without a fast and accurate diagnostic, sick or dying children are often treated based on guesswork. This costs us hundreds of thousands of lives, wastes money on useless treatments and potentially increases resistance to antibiotics. A number of organizations in global health, including ours, are looking at prizes to stimulate research and development for desperately needed products. The prize we are designing targets biotech companies and works by rewarding companies that successfully develop this diagnostic and other products that are suitable for developing countries. The prize could help smaller and mid-size companies overcome barriers to investing in global health tools by mitigating the risks and offsetting the opportunity costs of development. The advantage for donors is that they only pay for success, resulting in significant value-for-money. The ultimate impact would be measured in terms of lives saved. The diagnostic test that could diagnose a variety of diseases in developing countries could save 350,000 lives each year and a significant amount of resources. That's a terrific investment any way you look at it. Prizes are not the answer to every global health problem. But for certain challenges, prizes can harness our competitive spirit to drive innovation in a time of limited resources. Now, we need the Obama administration and other donors to invest in prizes to help meet the urgent challenges of global health. This could transform the way we meet the health needs of developing countries and use foreign aid funding more wisely. Now that would be prize-worthy.

#### DOD energy programs don’t link---conservative won’t oppose

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

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