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### PPP Advantage – 1AC

#### Advantage \_\_\_\_\_: Public Private Partnerships

#### Support for EXPANDED P3s is high, but lack the necessary capacity – a national infrastructure bank serves as a critical model

LIKOSKY ET AL ’11 - senior fellow at the Institute for Public Knowledge, New York University (Likosky, Michael. Josh Ishimatsu. Joyce Miller. “RETHINKING 21ST - CENTURY GOVERNMENT: PUBLIC-PRIVATE PARTNERSHIPS AND THE NATIONAL INFRASTRUCTURE BANK”. June, 2011. http://www.ssrc.org/workspace/images/crm/new\_publication\_3/%7B2c5cfcc9-6b9e-e011-bd4e-001cc477ec84%7D.pdf)

In an era of severe budgetary constraints, how can the federal government ensure that America is investing in what is needed to promote economic competitiveness, broad-based opportunity, and energy security? Increasingly, public-private partnerships enjoy broad support as the answer to this question, across party lines and political divisions. Partnership-driven projects are pursued today in wide-ranging areas, including education, transportation, technology, oil and gas, clean energy, mineral extraction, and manufacturing. Well-considered partnerships compliment, strengthen, and reinforce those existing meritorious approaches carried out through traditional means. They represent a fundamentally distinct way for government to address complex challenges, with federal agencies playing a catalytic role rather than a directive one. A National Infrastructure Bank can provide the requisite capacity to implement public-private partnerships.

Rethinking the Function of Government

America is at a standstill. Federal, state, and local governments are facing overburdened public balance sheets while enormous sums sit in limbo in pension funds and in the accounts of what the mckinsey global Institute has called the new global power brokers: Asian sovereign funds, petrodollar accounts, private equity funds, and hedge funds. 1 It is why President obama posed this question to his economic Recovery Advisory Board in 2009:

Obviously we’re entering into an era of greater fiscal restraint as we move out of deep recession into a recovery. And the question I’ve had is people still got a lot of capital on the sidelines there that are looking for a good return. Is there a way to channel that private capital into partnering with the public sector to get some of this infrastructure built? 2

Unless we can shepherd this money into our productive economy, the country will have to forego much-needed projects for lack of financing.

Public-private partnerships involve federal agencies coinvesting alongside state and local governments, private firms, and nonprofits. Having partnerships within a government’s toolbox not only brings a sizable new source of capital into the market, it also allows public officials to match assets with the most appropriate and cost-effective means of financing. If a class of existing and new projects can be financed from private sources, then we can begin to decrease our debt burden while also investing and growing our economy. Scarce public funds are then freed up to be spent on essential services and those projects best financed through traditional means.

Because the success of partnerships depends upon collaborations between government and private firms that may under other circumstances be viewed as raising conflicts of interest, a rethinking of the function of government is essential. In a recent opinion piece in the Wall Street Journal, the president announced an executive order, Improving Regulation and Regulatory Review, 3 which “requires that federal agencies ensure that regulations protect our safety, health and environment while promoting economic growth.” 4 The piece, entitled “Toward a 21st-century Regulatory System,” was accompanied by an evocative drawing of a regulator wielding an oversized pair of scissors busily cutting through a sea of red tape. While widely viewed as an effort to curry favor with American businesses, this presidential outreach can also be read as an indication that the federal government will support—and encourage—divergent groups working together to cut through outmoded, counterproductive, or unnecessarily burdensome regulation.

Public-private partnerships are especially suited to fulfilling the order’s directives and **can serve as a** model **for our** twenty-first-century **federal agencies**. If coming together as a team—public and private, Republican and Democrat, progressive and Tea Party—**is a precondition** not only to winning the future but also **to solving today’s** seemingly intractable **problems**, then we must take the task at hand seriously. Diverse groups must appreciate the unique and valuable resources and perspectives that those who are their combatants in other contexts bring to the team. Government agencies, more accustomed to acting as referee—setting down basic rules of the game and constraining behavior deemed contrary to the public interest—must find ways of coaching this unruly bunch, not from the sidelines but **as a vital player**.

Government as player coach

In a recent appearance at gamesa Technology corporation’s factory in Fairless hills, Pennsylvania, President Obama called attention to the political challenge inherent to any large undertaking. This was a fitting locale for a discussion of the federal government’s evolving role, as Obama had helped catalyze a deal whereby the cerro de hula wind farm in honduras would purchase turbine exports from the gamesa factory with support from the export-Import Bank of the united States and from the central American Bank for Integration

A question from the factory floor concerned the proposed US Smart grid, an ambitious, expensive national project to create a modernized, efficient national electricity grid that would save energy over the long haul by reducing the waste tied to our country’s antiquated distribution network. Asked whether the federal government had plans to lay out the substantial sum needed to carry out this endeavor, the president gave an answer that might surprise some, explaining that “the challenge is not so much a money issue.” Pointing to the fact that we “could probably get a lot of private-sector dollars to invest in a smart grid,” he asserted that the challenge was instead a political one, “all these different zoning laws” that arise because “people don’t want transmission lines, et cetera, in their vicinity.” moreover, “each state and each local government has its own control about siting issues,” so that America behaves like a patchwork of interests rather than as a united nation. 5

This political challenge is not a light one and requires working together across diverse interests to coalesce as a team. No longer able to use the power of the purse as primary leverage, government must identify its own unique capacities as a problem-solver within a changed landscape, shifting from a directive to a catalytic role in order to identify and amend problematic regulation that stifles innovation and restricts economic growth while strengthening regulation essential to protect the public. Coaching from the sidelines will no longer ensure a win. Government will only be fully engaged and effective if it has a direct interest in the outcome—federal agencies must act as player-coaches.

A player-coach is a member of the team who simultaneously holds both playing and coaching responsibilities. The challenges and constraints faced by fellow team members can best be appreciated on the field, in the heat of play. The player-coach can then inspire the top individual performance of each player while keeping everyone’s eyes on the ball, lending a hand when his or her particular skills are called for. A player-coach does not embrace a game without rules nor an overly managerial approach because he or she knows first-hand both the value of a game plan and the need to adapt, problem-solve, and innovate on the fly. genuinely skilled player-coaches are able to move strategically and seamlessly between their roles as coach and player in a way that maximizes the team’s interests. one of the best, Bill Russell, found just the right balance in his second season as player-coach of the Boston celtics, when he began making careful targeted use of his time off the sidelines after spending many minutes on the court in his first season. 6

Most important, a player-coach agency can turn opponents into teammates. Too frequently, we hamstring our ability to work together by tethering our debates over the appropriate role and function of government to philosophical poles of government and the economy—such as a night-watchman state or a keynesian one. These approaches exist in their pure forms only within textbooks and political discourse. Today’s pressing challenges demand that we eschew the litmus-test politics that result from the lionizing of philosophical puritanism so that we can find common ground—where traditional regulation and business innovation meet— and advance our shared values together in a workable way. For America to win the future, the government must be fully in the game with truly modern entrepreneurial public agencies that promote public values as a growth accelerant.

The Economic Philosophy of Public Private Partnership

In his last two shareholder letters, Warren Buffet, chairman and chief executive officer of the large holding company Berkshire hathaway, set out the basic economic philosophy behind public-private partnerships. Berkshire has made investing in these partnerships a new core aspect of its portfolio, both out of a sense of national duty and with the expectation of years of reliable returns.

In his 2009 letter, Buffet groups Berkshire’s electricity and railroad investments in the common category of “regulated utility.” Arguing that “it is inconceivable that our country will realize anything close to its full economic potential without its possessing first class electricity and railroad systems,” he indicates that Berkshire “will do our part to see that they exist.” In return, Buffet expects “this regulated sector to deliver significantly increased earnings over time, albeit at the cost of our investing many tens—yes, tens—of billions of dollars of incremental equity capital.” In other words, Berkshire commits to large sums of upfront capital and ongoing investments to help drive the economic growth necessary to generate direct and indirect profits in the future as individuals and governments become less cash-strapped.

Buffet takes the position that the bond holding together the long-term business relationships between Berkshire and “the public” arises from a “social compact.” It is a compact based in part on pragmatism: “**If** either side **shirks** its obligations, **both sides will inevitably suffer**.” This pragmatism stems from enlightened self-interest: “both parties to the compact should—and we believe will—understand the benefit of behaving in a way that encourages good behavior by the other.” Private-sector contributions to public works that benefit all require “wise regulators who will provide certainty about allowable returns so that we can confidently make the huge investments required.” 7

 This appeal to a social compact is not a radical idea. Many presidents have turned to partnerships as a way to mobilize the private sector. In 1981, Ronald Reagan formed the Presidential Task Force on Private Sector Initiatives, which brought together “leaders from corporations, foundations, and voluntary and religious organizations” for the purpose of “promot[ing] private sector leadership and responsibility for solving public needs, and to recommend ways of fostering greater public-private partnerships.” 8 Abraham Lincoln’s Transcontinental Railroad, Teddy Roosevelt’s Panama canal, and Dwight Eisenhower’s National System of Interstate and Defense highways would all **unify the nation**—and support America’s growth—**for generations** as the foundations of a truly national economy.

 Public-private partnerships have also been a centerpiece of our foreign commercial affairs across presidencies and parties. In fact, Franklin Delano Roosevelt’s export-Import Bank and Richard Nixon’s overseas Private Investment corporation are both durable partnership-driven foreign-affairs institutions that together literally wove the World Wide Web with the laying of fiber-optic cables around the globe.

#### Only a federal infrastructure bank would provide the foundation for durable and balanced P3s that spill over – impact is gas infrastructure innovation

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Support for partnerships goes deep into the benches of both parties. Senator orrin hatch (R-uT) has spoken of our country’s “belief in public-private partnerships that cost the government little and bring a high return on that investment.” 10 The mayor of New york city, michael Bloomberg, an independent, former governor ed Rendell (D-PA), and former governor Arnold Schwarzenegger (R-cA) formed the bipartisan Building America’s Future, a coalition of governors and mayors who support infrastructure partnerships. governor John hickenlooper (D-co) advocates public private partnerships that have “statewide support from stakeholders who understand the increased demand on our transportation system and the financial challenges we face” for moving projects forward. 11 even the conservative Americans for Prosperity is in favor of “implementing more public-private partnerships to build and expand roads.” 12 Koch Industries supports a range of partnerships, from road projects, 13 to biofuels, 14 to oil and gas. 15 likewise, David koch’s philanthropic investments to combat cancer helped establish the David h. Koch Institute for Integrative cancer Research at the Massachusetts Institute of Technology, which brings together “biologists, engineers, and others in the physical sciences” to address challenges. This innovative approach to problem-solving aims to influence federal-spending priorities, increasing National Institutes of health support for convergence-driven approaches in line with emerging federal trends supported by President obama and his administration more generally. 16 It points to the dynamism of public-private partnerships and how a culture of innovation, financing, and entrepreneurship can provide a safe harbor in a toxic political environment.

Thus, in a period of often immobilizing polarization, public-private partnerships offer a pragmatic way forward informed by an economic philosophy that does not fall neatly in line with political divisions or special interests. Government should seize these opportunities **to serve as a** catalyst for the identification of common goals and productive avenues **that can bring all players together** as a team and to promote a team spirit that will allow for constructive compromise when interests diverge and provide continuity across political seasons. But to be an effective player-coach for these public-private partnerships, public agencies must know both the rules of the game and how it is played.

Public-Private Partnerships In Practice

Although partnerships are a well-established way for politicians, businesspeople, and nonprofits of various stripes to work together, little attention has been paid to defining what public-private partnerships are, how they work in practice, and the distinct roles played by the federal government. At the center on law & Public Finance, we reviewed this approach across sectors, including commercial affairs both at home and abroad, and across historical periods dating back to America’s founding, paying particularly close attention to party commonalities and differences. We also did extensive surveys of partnerships involving foreign governments and international organizations. 17

Because partnerships are deployed across agencies and time and under a range of circumstances, most employ a multi-pronged strategy. our research revealed ten common features of public-private partnerships: 1. Coinvestment—The federal government coinvests alongside state and local governments, private firms, and nonprofits. 2. Cooperation—Public and private team members work together over the life of a project, from conception to planning, building, operating, and maintaining. 3. Collaboration—Cross-sector approaches are used to bust silos. 4. Maximization—Programs and projects are designed for high returns on federal investment. 5. Measurement—Project selection involves rigorous, analytical, metric-based processes.6. Competition—Federal support is awarded based upon competitive processes. 7. Innovation—Innovative approaches to research and development, design, and delivery are encouraged and rewarded. 8. Improvement—Existing programs are continually improved, and new programs are continually created. 9. Pragmatism—Problem-solving methods are applied. 10. Flexibility—Programs and projects adapt as circumstances demand, focusing on long-term problems while anticipating short-term results

Partnerships may incorporate a few or many of these features in different combinations as projects evolve

The central role of government in public-private

Partnerships is to identify public needs and facilitate private investment in those areas. By using modest sums as leverage, government—acting as player-coach— can recruit the right players for the team and elicit the best performance from each position. We found that government generally relies on seven financial tools to stimulate and target investment in public-private partnerships:

1. Matching grants 2. Guarantees 3. Loans 4. Insurance 5. Tax credits 6. Interest subsidies 7. Innovative bond vehicles

These federal tools are often used in conjunction with state and local instruments.

Government can also provide effective leadership through non-financial tools, much like when a player calls for the ball when there’s an open shot or a coach drafts a new player to the team who ups everyone’s performance, gives an inspiring halftime lockerroom pep talk, or orchestrates a successfully executed game plan. Federal agencies typically support public private undertakings in six primary ways:1. Promotion—Event planning, international networking, road shows, high-level advocacy, market access, opportunity identification, and video conferencing 2. Expertise—Expert advice, policy consultation, and security assistance 3. Information and analysis—Commentaries, databases, directories, guides, libraries, market profiles, and publications 4. Research and development—Feasibility studies 5. Education and training—Programs and materials6. Legal support—Legal assistance in ensuring compliance, dispute settlement arenas, and legislative advocacy overseas

Most agencies have at least one substantial public-private partnership program already in place, and a number of standalone entities devote themselves exclusively to this approach, **but there is little systematic learning between programs**. Honing the federal government’s ability to implement partnerships following a standard playbook will increase capacity across agencies to deliver beyond what are now often discrete programs and projects and help repurpose agencies to do more with less resources.

Extractives Partnerships

Both at home and abroad, the federal government uses public-private partnerships within the extractives sector to aid in the pursuit of oil, gas, metals, and minerals. These projects can be ambitious, involving many countries or state governments, as well as networks of private financiers, contractors, and subcontractors, and therefore exacting attention to planning, financing, construction, operation, and maintenance is often critical. Because extractives partnerships can last for decades, **they must be resilient and oriented for the long term** through careful contracting, **with public agencies playing key roles** throughout a project lifecycle, from the identification of an opportunity, to tendering, extraction, and distribution.

In the foreign context, our most active federal entities include the export-Import Bank of the united States (ex-Im) and the overseas Private Investment corporation (oPIc). Both promote US foreign-commercial policy aims by partnering with American firms on projects overseas. Support provided includes feasibility studies, loans, loan guarantees, insurance, and assistance for small businesses exporting key project components. Through their involvement in projects taking place in other countries, ex-Im and oPIc by extension partner with foreign government agencies and firms as well. The united States is also involved in the extractives sector through our relationships with international agencies and banks, such as the World Bank group’s International Finance corporation and multilateral Investment guarantee Agency, the African Development Bank, the Asian Development Bank, and the Inter-American Development Bank

Domestically, a range of federal entities are actively engaged in extractives partnerships, including the Department of the Interior, the Department of energy, the Department of commerce, the occupational Safety and health Administration, and the environmental Protection Agency. Because these projects are often carried out by specific states and can involve distribution through multi-state pipelines, state agencies are key partners along with private firms. This sector carries implications for the global extractives market and can also have a heavy and far-flung impact on the environment, so the federal government is implicitly involved whenever and wherever extraction occurs within our borders, whether the partnership is formalized or not.

Infrastructure and Clean-Energy Partnerships

Public-private partnerships in the infrastructure and clean-energy sectors are a basic feature of our foreign and domestic affairs. like extractives partnerships, they are often complex, which demands careful contracting and close, coordinated attention through all project stages. The united States has been much more actively involved in infrastructure and clean-energy partnerships abroad than at home, participating through many of the same federal entities and international channels that connect us to the global extractives sector

Domestically, we pursue infrastructure and clean-energy partnerships largely through federal agencies that operate only in specific areas. This silo approach does not allow for much cross-agency capacity building and knowledge sharing and limits our ability to leverage private participation to produce the greatest gain. examples of partnership programs in infrastructure and clean energy include the Department of Transportation’s Transportation Infrastructure Finance and Innovation Act program for roads and other transportation projects as well as the Department of energy’s 1603, 1703, 1705, and ATvm (Advanced Technology vehicles manufacturing) programs geared to clean-energy production. likewise, our National Broadband Plan, administered by the Federal communications commission, is partnership-driven. Partnerships play a part in biorefineries programs administered by the Department of Agriculture, are utilized by the Department of commerce in its carrying out of the America Competes (creating opportunities to meaningfully Promote excellence in Technology, education, and Science) Act, which supports infrastructure investment in science parks, and are involved in the infrastructure aspects of a number of Regional Innovative cluster initiatives spearheaded by the Small Business Administration, the Department of Defense, the Department of Agriculture, and the Department of energy.

Some of our infrastructure and clean-energy partnerships are interagency efforts, with perhaps the most ambitious being the National export Initiative, which President obama established with the aims of doubling uS exports in the next five years and adding two million American jobs. This initiative involves the Departments of Agriculture, commerce, labor, State, and the Treasury. The office of management and Budget, the office of the uS Trade Representative, the Assistant to the President for economic Policy and Director of the National economic council, the National Security Advisor, the council of economic Advisers, ex-Im, oPIc, the Small Business Administration, and the uS Trade and Development Agency are all actively coordinating in this effort. As with other major partnerships, the National export Initiative is an attempt to leverage the federal government’s ability to work across agencies, with state and local governments, and with the private sector to advance the public interest.

Specialized Partnerships

A number of modest but important interagency initiatives have been established to break down silos and address pressing challenges with modest federal resources. one of the most significant, the healthy Food Financing Initiative, is spearheaded by First lady michelle obama. Although it is smaller than many partnership programs, this initiative is a model program with its carefully defined public purpose, high leveraging ratios, cooperative approach, and attention to impact upon beneficiaries. It mobilizes the resources of the Departments of Agriculture and the Treasury and works closely with state and local governments and also the private sector to catalyze investments in grocery stores, small businesses, and communities within economically distressed areas in order to eliminate food “deserts” where there is no fresh produce or healthy affordable food available. Another effort, the Partnership for Sustainable communities, led by the housing and urban Development Agency, the Department of Transportation, and the environmental Protection Agency, aims to make “development, housing, energy, and transportation policy go hand in hand.” 18 Dr. Jill Biden, the wife of vice President Joe Biden, is spearheading the Strengthening our military Families campaign, a joint effort by the Departments of Agriculture, Defense, education, health and human Services, labor, and commerce to promote career opportunities for uS veterans and increase childcare options for military families.

Some independent federal entities devote themselves to partnership-driven approaches. For instance, obama recently brought the Administrative conference of the united States back from its long hiatus, re-christening it as “a public-private partnership designed to make government work better” 19 by improving administrative processes on a consensus, non-partisan basis drawing from government, the private sector, and academia. other freestanding initiatives include the council of governors, which works with the president to fashion responsive, innovative solutions to challenges faced by states, and the Advisory council on Faith-Based and Neighborhood Partnerships, which aims to ensure that government and local communities benefit from the resources of faith-based entities.

Within agencies, many partnership initiatives address domestic and international challenges. The commerce Department aggressively deploys partnerships both domestically and internationally through its Trade Information center, manufacturing and Services unit, uS commercial Service, and Buy uSA program. The Department of education’s Race to the Top Fund is a partnership program designed to harness privatesector and nonprofit energy, capacity, and commitment to address seemingly intractable inequalities within the k-12 sector. Structured differently, No child left Behind is an education-partnership model put into practice during george W. Bush’s presidency. Within the State Department, which itself has many partnership programs, including the Foreign military Financing and Direct commercial Sales programs, a global Partnership initiative has been established to bring the skills and expertise of private firms and nonprofits to bear on international development efforts. The Defense Department has also been a central player within partnership approaches, from its participation in the creation of the Internet to the Defense Security cooperation Agency’s Foreign military Sales program. Similarly, the Department of Agriculture has its commodity credit corporation and also the Foreign Agricultural Service.

Key Challenges And Recommendations

Given the increasing utilization of public-private partnerships to address pressing problems while weathering a long-term budgetary crisis, it is productive to focus attention on making them work better. We see three key recurring challenges for our federal agencies as they implement and refine partnerships:

1. Increase Capacity to Assess, Structure, and Oversee Projects

Because partnership programs engender a shift in the role and function of government and introduce complex financial and contractual instruments, public agencies often lack the capacity to assess, structure, and oversee projects. To realize the full benefits of public-private partnerships, this capacity must be put in place across the federal government.

2. Improve Interagency Coordination

Many of our most pressing economic and societal challenges require policy solutions that integrate a range of sectors, including water, transportation, and energy. however, our federal agencies typically operate in sector-based silos, which often leads to uncoordinated sector-specific policies that only aggravate existing problems. To maximize the efficiencies offered by public-private partnerships, there must be increased knowledge sharing and coordination among agencies.

3. Improve Relations Between Federal Agencies and State and Local Governments, Private Firms, and Nonprofits

Projects can stall because a partner cannot withstand criticism or else digs in its heels or because of a lack of adequate funds. For public-private partnerships to be viable over the long term, agencies must act as playercoach to coalesce combatants as a team, recognize the unique contributions of each player, and explore solutions that leverage non-financial resources to make public budgets stretch further.

To increase the partnerships capacity of public agencies and prepare them for their roles as playercoaches, we make the following institution-building recommendations:

1. Cross-Agency Review and Identification of Best Practices

A survey and assessment of the existing landscape should be performed to identify lessons learned that can serve as a baseline for modeling partnership programs. This review should look not only at domestic programs but also at those overseas.

2. Best Practices Pool

Once a baseline is established, a best practices pool should be created to serve as a repository of knowledge and expertise on partnerships, including candid advice to public officials on financing and contracting and interfacing with state and local governments as well as private firms and nonprofits. This pool must be created in-house to protect the broad player-coach perspective of public agencies from the self-serving viewpoints of individual players.

3. Portfolio-Based Approach

To ensure that the partnership tools and practices that agencies choose to implement are appropriate to the task at hand and lead to positive outcomes, the federal government should establish a portfolio-based approach to its public-private partnerships that will allow for assessment of the impact of projects on beneficiaries, both project by project and as a whole. Attention must be paid not only to how partnerships fit with one another but also to how they relate to nonpartnership-based initiatives.

National Infrastructure Bank

The success of public-private partnerships—and we argue, of America’s economic recovery and revitalization—will hinge on the federal government’s ability to leverage sizeable sums of private capital for effective investment in public infrastructure and to meet the key partnership challenges outlined in this report. A National Infrastructure Bank would provide the requisite capacity to finance, contract, and oversee complex, large-scale projects on an individual basis and **as part of a** **broad portfolio**.

As an independent entity not sitting under a specific federal agency, a National Infrastructure Bank would be able to make decisions based upon the merits of proposals rather than politics. Its independence would allow the bank to survive transitions in political leadership at the federal, state, and local levels, **essential** **for ensuring that** partnership **projects**, which can run for decades, **are durable**. To remain attuned to the underlying public needs that drive shifts within leadership, the bank’s governance should incorporate the participation of board members recommended by both parties.

#### Scenario 1: Gas (if you feel like debating in college…)

#### Better gas infrastructure would enable us to drill – balance global supply and demand of resources

HELMAN ’12 – Forbes Staff (Helman, Christopher. “The U.S. Has A Natural Gas Glut; Why Exporting It As LNG Is A Good Idea”. June 13, 2012. http://www.forbes.com/sites/energysource/2012/06/13/the-u-s-has-a-natural-gas-glut-why-exporting-it-as-lng-is-a-good-idea/)

The emergence of shale gas has caused natural gas prices in North America to drop to the lowest levels seen in decades. Shale gas resources elsewhere in the world, however, have not yet been developed to the same extent—creating a sustainable arbitrage opportunity. Given the potential profitability of liquefying surplus North American gas production and exporting it as Liquefied Natural Gas (LNG), a number of companies are now willing to develop capital-intensive natural gas export projects.

LNG exports will help to provide **better balance between supply and demand** in the market, **dampening price volatility** in North America, and providing circumstances in which industrial gas investments and feedstock natural gas purchases can be made with greater confidence in long-term natural gas pricing.

As recently as 2007, North America was looking at a significant gas shortage and more than sixty LNG import projects were proposed. Just five years later, the implementation of horizontal drilling and hydraulic fracturing has led North America to a sizable excess of gas supply. The latest figures from the U.S. Energy Information Agency (EIA) indicate that natural gas supply could exceed demand by 2016, enabling North America to become a net exporter of LNG.

The rapid increase in natural gas production has had a substantial impact on gas pricing in North America. While gas prices in North America are not directly correlated to oil prices, up until late 2008, natural gas prices generally matched oil price trends. Since the increase in shale gas production was first identified in Navigant’s groundbreaking North American Natural Gas Supply Assessment in 2008, natural gas prices have headed downwards from $5.00 per million British thermal units (mmBtu) to approximately $2.50 per mmBtu in May 2012. However, although natural gas prices decreased, crude oil prices increased during the same period. While the EIA indicates that long term North American natural gas prices will rise to $4.00 to $6.00 per mmBtu, natural gas will continue to trade at a sizable discount to oil on an energy equivalent basis.

Unlike crude oil, there is **not yet a large tradable global market** for natural gas **and consequently, prices vary across the world**. In Asia, prices for major LNG importers closely correlate to oil prices, and LNG is currently priced over $17.00 per mmBtu. In Europe, prices are lower at $12.00 to $14.00 per mmBtu.

For North American producers to benefit from higher global prices they must successfully construct costly and complex LNG facilities and related infrastructure costing billions of dollars.

#### Solves resource wars

BARNETT ’12 - American military geostrategist and Chief Analyst at Wikistrat (Barnett, Thomas. P.M. “Death to “Resource Wars”!”. May 29, 2012. http://battleland.blogs.time.com/2012/05/29/death-to-resource-wars/)

Nice Washington Post piece on Saturday about how the “center of gravity” in global oil exploration and production is shifting to the Western hemisphere. No, the bulk of global conventional oil reserves still sits in the Persian Gulf, but the larger point is worth exploring: we no longer project global futures where East and West logically fight over Middle East energy reserves. Those expected long-term dynamics are collapsing right now before our eyes.

It’s not just the new conventional oil finds in the Americas, but the lifting of unconventional reserves (so-called tight oil). Then there’s the “fracking revolution” in natural gas that **favors the Western Hemisphere in a** big, **big way,** **because** four of **the top** seven **reserves** in the world (U.S., Argentina, Mexico, Canada) **are found here**. The fracking revolution kicks off two additional mini-revolutions in energy: the accelerated shift to natural gas-powered vehicles, reducing the oil demand even further, and the displacement of coal in electricity generation frees up the cleanest and most high-quality coal in the world for export to Asia, where electricity demand is skyrocketing.

So here’s the geo-strategic reality shaping up: the Western Hemisphere doesn’t need the Persian Gulf, which is source #5 to the U.S. market, after the U.S. itself, North America, South America and Africa. But not only is the U.S. increasingly less worried about the Persian Gulf and more willing — logically — to let that become Asia’s problem to manage (it’s their oil after all, as more than half of it heads their way now, and that percentage will only grow), it also **becomes** a trusted and **important** energy supplier **to Asia** (liquid natural gas and coal over time).

#### Resource wars cause extinction

Heinberg ‘4

(Richard, Senior Fellow of the Post Carbon Institute, faculty @ New College of California, “Book Excerpt: Powerdown: Options and Actions for a Port-Carbon World,” http://www.energybulletin.net/node/2291)

The notion that resource scarcity often leads to increased competition is certainly well founded. This is general true among non-human animals, among which competition for diminishing resources typically leads to aggressive behaviour. Iraq is actually the nexus of several different kinds of conflict – between consuming nations (e.g., France and the US); between western industrial nations and “terrorist” groups; and – most obviously – between a powerful consuming nation and a weaker, troublesome, producing nation. Politicians may find it easier to persuade their constituents to fight a common enemy than to conserve and share. War is always grim, but as resources become more scarce and valuable, as societies become more centralized and therefore more vulnerable, and as weaponry becomes more sophisticated and widely dispersed, warfare could become even more destructive that the case during the past century. By far the greatest concern for the future of warfare must be the proliferation of nuclear weapons. The US is conducting research into new types of nuclear weapons—bunker busters, small earth-penetrators, etc. Recent US administrations have enunciated a policy of nuclear first-strike. Chemical and biological weapons are of secondary concern, although new genetic engineering techniques may enable the creation of highly infectious and antibiotic-resistant “supergerms” cable of singling out specific ethnic groups.

#### Scenario 2: Cyber Security

#### The threat of a devastating cyber attack is real – P3 is critical to solve cyber-security cooperation

FARRELL ’11 - deputy chief of staff for the US Air Force; Program for Senior Executives in National and International Security, Harvard University (“To Improve Cyber-Security, U.S. Needs Cohesive Public-Private Partnership”. February, 2011. http://www.nationaldefensemagazine.org/archive/2011/February/Pages/ToImproveCyber-Security,USNeedsCohesivePublic-PrivatePartnership.aspx)

For the Pentagon, which operates 15,000 networks and owns more than a million computers, the risks are huge. Though Defense systems are **attacked constantly** — 5,000 times per day by some accounts, and scanned millions of times per day — these digital invasions are little reported.

Banks lose millions of dollars a year from cyberintrusions. Each bank averages one million probes per month. These too, are little reported. The banks see this as a cost of doing business, and customers pay the cost in increased user fees. Manhattan District Attorney Cyrus Vance Jr. says, “The Internet is the crime scene of the 21st Century.”

For the typical PC user, the average security software package provides little insight into the true nature or danger of these attacks. And the average attack by a new virus is almost never protected by existing security software. This protection almost always comes after many computers have been infected.

For the past three decades, the Pentagon’s modernization investments have been shifting from platforms to upgrades to sensors, communications and intelligence-collection enhancements — all dependent on secure, well-functioning networks. The theory is that existing platform capabilities coupled with these “information” enhancements will provide dominant capability for U.S. forces. Adequate cyber-security is an implicit assumption to this development strategy. It is, too, a critical assumption.

**NDIA** member **companies** recently **put together a white paper** on the necessity to better acquire and field cyber-capabilities. The paper focused first on the problems with existing processes. Currently, responsibility is highly distributed and the acquisition is unfocused.

Multiple, **overlapping policy**, governance execution **and** reporting **entities** in Defense, Homeland Security, the Office of the Director of National Intelligence, the Energy Department, the Federal Energy Regulatory Commission (that promulgates requirements for the electrical grid) and other federal agencies **inhibit effective cyber-protection**. It is piecemeal and disjointed. The U.S. government is not taking full advantage of the investment that industry has already made in cyber-security.

There has been much capability already developed, but little emphasis has been placed on reuse and redeployment. Scant credit is given in procurements for already developed and embedded cyber-capability. Contract awards are often given for “technically compliant/lowest cost” while criteria for “best value” is less frequently encountered. State and local government entities must also be folded into a comprehensive program.

The nation must have a coherent acquisition approach, a cohesive strategy, and supporting legislation/regulation that recognizes and corrects the disconnects in organization and execution. There needs to be better integration through all government entities, laterally and vertically.

For all these reasons, there must be a much closer partnership between government and industry. This would promote a more robust understanding and definition of cyber-requirements, and a better recognition of and capitalization of the existing capability embedded in contractor developed software.

The necessity to address vulnerabilities was recently recognized by Army Gen. Keith Alexander, commander of U.S. Cyber Command. He has said the Defense Department is not only vulnerable to its own systems, but faces risks from systems owned and maintained by others that the government relies upon. “Our mission at Cyber Command includes not only the defense of our military networks, but also a role in guarding our nation’s defense industrial base,” he said. “More than 90 percent of our military’s energy is generated and distributed by the private sector and **more than 80 percent of our logistics are transported by private companies**.”

#### A successful cyber attack ensures accidental nuclear war – multiple warrants

Fritz ‘9 (Jason - former Captain of the U.S. Army, July, Hacking Nuclear Command and Control)

The US uses the two-man rule to achieve a higher level of security in nuclear affairs. Under this rule two authorized personnel must be present and in agreement during critical stages of nuclear command and control. The President must jointly issue a launch order with the Secretary of Defense; Minuteman missile operators must agree that the launch order is valid; and on a submarine, both the commanding officer and executive officer must agree that the order to launch is valid. In the US, in order to execute a nuclear launch, an Emergency Action Message (EAM) is needed. This is a preformatted message that directs nuclear forces to execute a specific attack. The contents of an EAM change daily and consist of a complex code read by a human voice. Regular monitoring by shortwave listeners and videos posted to YouTube provide insight into how these work. These are issued from the NMCC, or in the event of destruction, from the designated hierarchy of command and control centres. Once a command centre has confirmed the EAM, using the two-man rule, the Permissive Action Link (PAL) codes are entered to arm the weapons and the message is sent out. These messages are sent in digital format via the secure Automatic Digital Network and then relayed to aircraft via single-sideband radio transmitters of the High Frequency Global Communications System, and, at least in the past, sent to nuclear capable submarines via Very Low Frequency (Greenemeier 2008, Hardisty 1985). The technical details of VLF submarine communication methods can be found online, including PC-based VLF reception. Some reports have noted a Pentagon review, which showed a potential “electronic back door into the US Navy’s system for broadcasting nuclear launch orders to Trident submarines” (Peterson 2004). The investigation showed that cyber terrorists could potentially infiltrate this network and insert false orders for launch. The investigation led to “elaborate new instructions for validating launch orders” (Blair 2003). Adding further to the concern of cyber terrorists seizing control over submarine launched nuclear missiles; The Royal Navy announced in 2008 that it would be installing a Microsoft Windows operating system on its nuclear submarines (Page 2008). The choice of operating system, apparently based on Windows XP, is not as alarming as the advertising of such a system is. This may attract hackers and narrow the necessary reconnaissance to learning its details and potential exploits. It is unlikely that the operating system would play a direct role in the signal to launch, although this is far from certain. Knowledge of the operating system may lead to the insertion of malicious code, which could be used to gain accelerating privileges, tracking, valuable information, and deception that could subsequently be used to initiate a launch. Remember from Chapter 2 that the UK’s nuclear submarines have the authority to launch if they believe the central command has been destroyed. Attempts by cyber terrorists to create the illusion of a decapitating strike could also be used to engage fail-deadly systems. Open source knowledge is scarce as to whether Russia continues to operate such a system. However evidence suggests that they have in the past. Perimetr, also known as Dead Hand, was an automated system set to launch a mass scale nuclear attack in the event of a decapitation strike against Soviet leadership and military. In a crisis, military officials would send a coded message to the bunkers, switching on the dead hand. If nearby ground-level sensors detected a nuclear attack on Moscow, and if a break was detected in communications links with top military commanders, the system would send low-frequency signals over underground antennas to special rockets. Flying high over missile fields and other military sites, these rockets in turn would broadcast attack orders to missiles, bombers and, via radio relays, submarines at sea. Contrary to some Western beliefs, Dr. Blair says, many of Russia's nuclear-armed missiles in underground silos and on mobile launchers can be fired automatically. (Broad 1993) Assuming such a system is still active, cyber terrorists would need to create a crisis situation in order to activate Perimetr, and then fool it into believing a decapitating strike had taken place. While this is not an easy task, the information age makes it easier. Cyber reconnaissance could help locate the machine and learn its inner workings. This could be done by targeting the computers high of level official’s—anyone who has reportedly worked on such a project, or individuals involved in military operations at underground facilities, such as those reported to be located at Yamantau and Kosvinksy mountains in the central southern Urals (Rosenbaum 2007, Blair 2008) Indirect Control of Launch Cyber terrorists could cause incorrect information to be transmitted, received, or displayed at nuclear command and control centres, or shut down these centres’ computer networks completely. In 1995, a Norwegian scientific sounding rocket was mistaken by Russian early warning systems as a nuclear missile launched from a US submarine. A radar operator used Krokus to notify a general on duty who decided to alert the highest levels. Kavkaz was implemented, all three chegets activated, and the countdown for a nuclear decision began. It took eight minutes before the missile was properly identified—a considerable amount of time considering the speed with which a nuclear response must be decided upon (Aftergood 2000). Creating a false signal in these early warning systems would be relatively easy using computer network operations. The real difficulty would be gaining access to these systems as they are most likely on a closed network. However, if they are transmitting wirelessly, that may provide an entry point, and information gained through the internet may reveal the details, such as passwords and software, for gaining entrance to the closed network. If access was obtained, a false alarm could be followed by something like a DDoS attack, so the operators believe an attack may be imminent, yet they can no longer verify it. This could add pressure to the decision making process**,** and if coordinated precisely, could appear as a first round EMP burst. Terrorist groups could also attempt to launch a non-nuclear missile, such as the one used by Norway, in an attempt to fool the system. The number of states who possess such technology is far greater than the number of states who possess nuclear weapons. Obtaining them would be considerably easier, especially when enhancing operations through computer network operations. Combining traditional terrorist methods with cyber techniques opens opportunities neither could accomplish on their own. For example, radar stations might be more vulnerable to a computer attack, while satellites are more vulnerable to jamming from a laser beam, thus together they deny dual phenomenology. Mapping communications networks through cyber reconnaissance may expose weaknesses, and automated scanning devices created by more experienced hackers can be readily found on the internet. Intercepting or spoofing communications is a highly complex science. These systems are designed to protect against the world’s most powerful and well funded militaries. Yet, there are recurring gaffes, and the very nature of asymmetric warfare is to bypass complexities by finding simple loopholes. For example, commercially available software for voice-morphing could be used to capture voice commands within the command and control structure, cut these sound bytes into phonemes, and splice it back together in order to issue false voice commands (Andersen 2001, Chapter 16). Spoofing could also be used to escalate a volatile situation in the hopes of starting a nuclear war**.** “ “In June 1998, a group of international hackers calling themselves Milw0rm hacked the web site of India’s Bhabha Atomic Research Center (BARC) and put up a spoofed web page showing a mushroom cloud and the text “If a nuclear war does start, you will be the first to scream” (Denning 1999). Hacker web-page defacements like these are often derided by critics of cyber terrorism as simply being a nuisance which causes no significant harm. However, web-page defacements are becoming more common, and they point towards alarming possibilities in subversion. During the 2007 cyber attacks against Estonia, a counterfeit letter of apology from Prime Minister Andrus Ansip was planted on his political party website (Grant 2007). This took place amid the confusion of mass DDoS attacks, real world protests, and accusations between governments.

#### Independently, a successful cyber attack from Russia and China would cause nuclear major power war

**Habiger**, 2/1/**2010** (Eugue – Retired Air Force General, Cyberwarfare and Cyberterrorism, The Cyber Security Institute, p. 11-19)

However, there are reasons to believe that what is going on now amounts to a fundamental shift as opposed to business as usual. Today’s network exploitation or information operation trespasses possess a number of characteristics that suggest that the line between espionage and conflict has been, or is close to being, crossed. (What that suggests for the proper response is a different matter.) First, the number of cyberattacks we are facing is growing significantly. Andrew Palowitch, a **former CIA official now consulting with** the US Strategic Command (**STRATCOM**), which oversees the Defense Department’s Joint Task Force‐Global Network Operations, recently told a meeting of experts that the Defense Department has experienced almost 80,000 computer attacks, and some number of these assaults have actually “reduced” the military’s “operational capabilities.”20 Second, the nature of these attacks is **starting to shift** from penetration attempts aimed at gathering intelligence (cyber spying) **to offensive efforts** aimed at taking down systems (cyberattacks). Palowitch put this in stark terms last November, “We are currently in a cyberwar and war is going on today.”21 Third, these recent attacks need to be taken in a broader strategic context. Both Russia and China have stepped up their offensive efforts and taken a **much more aggressive cyberwarfare posture**. The Chinese have developed an openly discussed cyberwar strategy aimed at achieving electronic dominance over the U.S. and its allies by 2050. In 2007 the Department of Defense reported that for the first time China has developed **first strike viruses**, marking a **major shift** from prior investments in defensive measures.22 And in the intervening period China has launched a series of offensive cyber operations against U.S. government and private sector networks and infrastructure. In 2007, Gen. James Cartwright, the former head of STRATCOM and now the Vice Chairman of the Joint Chiefs of Staff, told the US‐China Economic and Security Review Commission that China’s ability to launch “denial of service” attacks to overwhelm an IT system is of particular concern. 23 Russia also has already begun to wage offensive cyberwar. At the outset of the recent hostilities with Georgia, Russian assets launched a series of cyberattacks against the Georgian government and its critical infrastructure systems, including media, banking and transportation sites.24 In 2007, cyberattacks that many experts attribute, directly or indirectly, to Russia shut down the Estonia government’s IT systems. Fourth, the current geopolitical context must also be factored into any effort to gauge the degree of threat of cyberwar. The start of the new Obama Administration has begun to help reduce tensions between the United States and other nations. And, the new administration has taken initial steps to improve bilateral relations specifically with both China and Russia. However, it must be said that over the last few years the posture of both the Chinese and Russian governments toward America has clearly become **more assertive, and** at times even **aggressive**. Some commentators have talked about the prospects of a cyber Pearl Harbor, and the pattern of Chinese and Russian behavior to date gives reason for concern along these lines: both nations have offensive cyberwarfare strategies in place; both nations have taken the **cyber equivalent of building up their forces**; both nations now regularly probe our cyber defenses looking for gaps to be exploited; both nations have begun taking actions that cross the line from cyberespionage to cyberaggression; and, our bilateral relations with both nations are increasingly fractious and complicated by areas of marked, direct competition. Clearly, there a sharp differences between current U.S. relations with these two nations and relations between the US and Japan just prior to World War II. However, from a strategic defense perspective, there are enough warning signs to warrant preparation. In addition to the threat of cyberwar, the limited resources required to carry out even a large scale cyberattack also makes likely the potential for a significant cyberterror attack against the United States. However, the lack of a long list of specific incidences of cyberterrorism should provide no comfort. There is strong evidence to suggest that **al Qaeda has the ability** to conduct cyberterror attacks against the United States and its allies. Al Qaeda and other terrorist organizations are extremely active in cyberspace, using these technologies to communicate among themselves and others, carry out logistics, recruit members, and wage information warfare. For example, al Qaeda leaders used email to communicate with the 9‐11 terrorists and the 9‐11 terrorists used the Internet to make travel plans and book flights. Osama bin Laden and other al Qaeda members routinely post videos and other messages to online sites to communicate. Moreover, there is evidence of efforts that al Qaeda and other terrorist organizations are actively developing cyberterrorism capabilities and seeking to carry out cyberterrorist attacks. For example, the Washington Post has reported that “U.S. investigators have found evidence in the logs that mark a browser's path through the Internet that al Qaeda operators spent time on sites that offer software and programming instructions for the **digital switches** that run power, water, transport and communications grids. In some interrogations . . . al Qaeda prisoners have described intentions, in general terms, to use those tools.”25 Similarly, a 2002 CIA report on the cyberterror threat to a member of the Senate stated that al Qaeda and Hezbollah have become "more adept at using the internet and computer technologies.”26 The FBI has issued bulletins stating that, “U. S. law enforcement and intelligence agencies have received indications that Al Qaeda members have sought information on Supervisory Control And Data Acquisition (SCADA) systems available on multiple SCADA‐related web sites.”27 In addition a number of jihadist websites, such as 7hj.7hj.com, teach computer attack and hacking skills in the service of Islam.28 While al Qaeda may lack the cyber‐attack capability of nations like Russia and China, there is every reason to believe its operatives, and those of its ilk, are as capable as the cyber criminals and hackers who routinely effect great harm on the world’s digital infrastructure generally and American assets specifically. In fact, perhaps, the most troubling indication of the level of the cyberterrorist threat is the countless, serious non‐terrorist cyberattacks routinely carried out by criminals, hackers, disgruntled insiders, crime syndicates and the like. If our enemies in Iraq are capable of such an effective cyberattack against one of our more sophisticated systems, consider what a more technologically advanced enemy could do. At the strategic level, in 2008, as the United States Central Command was leading wars in both Iraq and Afghanistan, a cyber intruder compromised the security of the Command and sat within its IT systems, monitoring everything the Command was doing. 35 This time the attacker simply gathered vast amounts of intelligence. However, it is clear that the attacker could have used this access to wage cyberwar—altering information, **disrupting the flow of information, destroying information, taking down systems**—against the United States forces already at war. Similarly, during 2003 as the United States prepared for and began the War in Iraq, the IT networks of the Department of Defense were hacked 294 times.36 By August of 2004, with America at war, these ongoing attacks compelled then‐Deputy Secretary of Defense Paul Wolfowitz to write in a memo that, "Recent exploits have reduced operational capabilities on our networks."37 This wasn’t the first time that our national security IT infrastructure was penetrated immediately in advance of a U.S. military option.38 In February of 1998 the Solar Sunrise attacks systematically compromised a series of Department of Defense networks. What is often overlooked is that these attacks occurred during the ramp up period ahead of potential military action against Iraq. The attackers were able to obtain vast amounts of sensitive information—information that would have certainly been of value to an enemy’s military leaders. There is no way to prove that these actions were purposefully launched with the specific intent to distract American military assets or degrade our capabilities. However, such ambiguities—the inability to specifically attribute actions and motives to actors—are the very nature of cyberspace. Perhaps, these repeated patterns of behavior were mere coincidence, or perhaps they weren’t. The potential that an enemy might use a cyberattack to soften physical defenses, increase the gravity of harms from kinetic attacks, or both, significantly increases the potential harms from a cyberattack. Consider the gravity of the threat and risk if an enemy, rightly or wrongly, believed that it could use a cyberattack to degrade our strategic weapons capabilities. Such an enemy might be convinced that it could win a war—conventional or **even nuclear**—against the United States. The effect of this would be to undermine our deterrence‐based defenses, making us **significantly more at risk of a major war**.

### State Budget Adv – Death Penalty Addon – 2AC

#### State budget cuts would cut into death penalty – strong momentum now

FOX ’10 (Fox. “Just or Not, Cost of Death Penalty Is a Killer for State Budgets”. March 27, 2010. http://www.foxnews.com/us/2010/03/27/just-cost-death-penalty-killer-state-budgets/)

There have been studies of costs of the death penalty before, but we have never seen the same reaction that we are seeing now," says Richard C. Dieter of the non-partisan Death Penalty Information Center. "Perhaps it is **because governments are looking for ways to cut costs**, and this is easier than school closings or layoffs, but it sure has hit a nerve."

In the last year, four states — Kansas, Colorado, Montana and Connecticut — have wrestled with the emotional and politically charged issue. In each state there was a major shift toward rejection of the death penalty and narrow defeats for legislation that would have abolished it. In Connecticut, both houses actually voted in favor of a bill that would have banned executions, but the governor vetoed it.

Unlike past debates over executions, the current battles are fueled largely by the costs the death penalty imposes on states. The numbers, according to the studies, are staggering.

Overall, according to Dieter, the studies have uniformly and conservatively shown that a death-penalty trial costs $1 million more than one in which prosecutors seek life without parole. That expense is being reexamined in the current budget crisis, with some state legislators advocating a moratorium on death-penalty trials until the economy improves.

An Urban Institute study of Maryland's experience with the death penalty found that a single death-penalty trial cost $1.9 million more than a non-death-penalty trial. Since 1978, the cost to taxpayers for the five executions the state carried out was $37.2 million dollars — each.

Since 1983, taxpayers in New Jersey have paid $253 million more for death penalty trials than they would have paid for trials not seeking execution — but the Garden State has yet to execute a single convict. Of the 197 capital cases tried in New Jersey, there have been 60 death sentences, the report said, and 50 of the those convictions were overturned. There currently are 10 men on the state's death row.

A recent Duke University study of North Carolina's death penalty costs found that the state could save $11 million a year by substituting life in prison for the death penalty. An earlier Duke study found that the state spent $2.1 million more on a death penalty case than on one seeking a life sentence.

The Tennessee Comptroller of the Currency recently estimated that death penalty trials cost an average of 48 percent more than trials in which prosecutors sought life sentences.

It was much the same story in Kansas. A state-sponsored study found that death penalty cases cost 70 percent more than murder trials that didn't seek the death penalty.

A Florida study found the state could cut its costs by $51 million simply by eliminating the death penalty.

But no state matches the dilemma of California, where almost 700 inmates are sitting on death row and, according to Natasha Minsker, author of a new report by the Northern California chapter of the American Civil Liberties Union, few will ever actually be put to death. In fact, she says, the odds against being executed are so great, murder suspects in California actually seek the death penalty because it is the only way to get a single room in the state's prison system.

"Only 1 percent of people sentenced to death in California in the last 30 years have been executed," Minsker said. "The death penalty in California is purely a symbolic sentence."

Her study found that the cash-strapped state could immediately save $1 billion by eliminating the death penalty and imposing sentences of life without parole. The alternative, if the cash-strapped state keeps the death penalty: spend $400 million to build a new death-row prison to house the growing number of prisoners.

Minsker said just keeping prisoners on death row costs $90,000 more per prisoner per year than regular confinement, because the inmates are housed in single rooms and the prisons are staffed with extra guards. That money alone would cut $63 million from the state budget. But other savings would ripple through every step of the criminal justice system as well, from court costs to subsidized spending for defense attorney and investigation expenses.

Will the economic slump and every state's need to cut budgets have an impact? Death penalty opponents say the recession has given their effort a **new**, non-political **reason for abolition that resonates on both sides** of the debate. But Professor Paul Cassell, the Ronald N. Boyce Presidential Professor of Criminal Law at the University of Utah and a death penalty expert, says that major changes are not likely to occur soon.

#### Death penalty is critical to solve terrorism

Joanna M. **Shepherd, 2007** (professor of law at Emory, “Capital Punishment Does in Fact Deter Crime,”

[http://2009researchpaper.wikispaces.com/file/view/Capital+Punishment+Pro+1.pdf](http://2009researchpaper.wikispaces.com/file/view/Capital%2BPunishment%2BPro%2B1.pdf))

Capital Punishment May Deter Terrorism Finally, let's talk about what if anything the studies might be able to tell us about whether capital punishment deters terrorism. Unfortunately, there is not yet any empirical research specifically on capital punishment and terrorism. Some people might think that all terrorists are undeterrable fanatics. In fact, it might even be suggested that capital punishment could increase terrorism if potential terrorists view executions as their ticket to holy martyrdom. If executions are a harsher penalty, then some terrorists should be deterred by them. However, the indirect evidence from the other studies suggest that this may not be the case for three reasons: First, research shows that capital punishment deters every kind of murder that has been studied. This includes many kinds of murderers like terrorists who might not seem to be deterrable. My own paper found the death penalty has a deterrent effect on all categories of murder including crimes of passion and intimate murders that many people think are undeterrable. Second, capital punishment could have an overall deterrent effect on terrorism even if many terrorists are not influenced by capital punishment. To give a deterrent effect, all that is necessary is that a small fraction of terrorists are deterred. Obviously, the death penalty does not deter all murders, but it does deter a small important fraction of them. Third, although there are exceptions, news accounts ... are replete with accounts of alleged terrorists who fight strenuously in court to get life imprisonment instead of the death penalty. These terrorists obviously view executions as a worse penalty than life in prison. If executions are a harsher penalty, then some terrorists should be deterred by them. Thanks again for having me, and I look forward to answering any questions you may have.

#### Nuclear war

Speice ‘6 (Patrick F. Jr., JD Candidate @ College of William and Mary “NEGLIGENCE AND NUCLEAR NONPROLIFERATION: ELIMINATING THE CURRENT LIABILITY BARRIER TO BILATERAL U.S.-RUSSIAN NONPROLIFERATION ASSISTANCE PROGRAMS,” February 47 Wm and Mary L. Rev. 1427)

The potential consequences of the unchecked spread of nuclear knowledge and material to terrorist groups that seek to cause mass destruction in the United States are truly horrifying. A terrorist attack with a nuclear weapon would be devastating in terms of immediate human and economic losses. 49 Moreover, there would be immense political pressure in the United States to discover the perpetrators and retaliate with nuclear weapons, massively increasing the number of casualties and potentially triggering a full-scale nuclear conflict. 50 In addition to the threat posed by terrorists, leakage of nuclear knowledge and material from Russia will reduce the barriers that states with nuclear ambitions face and may trigger widespread proliferation of nuclear weapons. 51 This proliferation will increase the risk of nuclear attacks against the United States [\*1440] or its allies by hostile states, 52 as well as increase the likelihood that regional conflicts will draw in the United States and escalate to the use of nuclear weapons.

### State Budget Adv – Disease Addon – 2AC

#### State budget cuts hamper disease prevention

TAH ‘11 (Trust for America’s Health. “Protecting the Public from Diseases, Disasters, and Bioterrorism”. December, 2011. http://healthyamericans.org/report/92/)

Ready or Not? Protecting the Public from Diseases, Disasters, and Bioterrorism finds key programs that detect and respond to bioterrorism, new disease outbreaks and natural or accidental disasters are at risk due to federal and state budget cuts.

The report, supported by the Robert Wood Johnson Foundation (RWJF), identifies some key programs at risk due to continued cuts to federal public health emergency preparedness funds include:

51 of the 72 cities in the Cities Readiness Initiative are at risk for elimination; the Initiative supports the ability to rapidly distribute and administer vaccines and medications during emergencies;

All 10 state labs with “Level 1” chemical testing status are at risk for losing top level capabilities, which could leave the U.S. Centers for Disease Control and Prevention (CDC) with the only public health lab in the country with full ability to test for chemical terrorism and accidents;

24 states are at risk for losing the support of Career Epidemiology Field Officers - CDC experts who supplement state and local gaps to rapidly prevent and respond to outbreaks and disasters, such as during the H1N1 flu pandemic and responding to the health impact of the Gulf Oil Spill in 2010; and

The ability for CDC to mount a comprehensive response to nuclear, radiologic and chemical threats as well as natural disasters is at risk due to potential cuts to the National Center for Environmental Health. All 50 states and Washington, D.C. would lose the support CDC provides during these emergencies.

"We're seeing a decade's worth of progress eroding in front of our eyes," said Jeff Levi, PhD, Executive Director of TFAH. "Preparedness had been on an upward trajectory, but now some of the **most elementary capabilities** - including the ability to identify and contain outbreaks, provide vaccines and medications during emergencies, and treat people during mass traumas - are experiencing cuts in every state across the country."

Combined federal, state and local budget cuts mean public health departments can no longer sustain a number of basic elements of preparedness. In the past year, 40 states and Washington, D.C. cut state public health funds - with 29 of those states and D.C. cutting their budgets for a second year in a row and 15 states for three years in a row. Federal funds for state and local preparedness declined by 38 percent from fiscal year (FY) 2005 to 2012 (adjusted for inflation) - and additional cuts are expected under budget sequestration.

"Americans expect the public health system to have the capability to competently protect their health during emergencies. This is not an optional service," said Mel Kohn, MD, MPH, State Health Officer and Public Health Director of the Oregon Health Authority. "**We will be unable to absorb reductions of this magnitude** simply by finding efficiencies. We have reached the point where our ability to do this work will be seriously compromised, with life and death consequences."

"During the anthrax attacks and Hurricane Katrina, we witnessed what happens when public health doesn't have the technology, resources, workforce or training needed to respond to emergencies," said James S. Marks, Senior Vice President and Director of the Health Group of RWJF. "The old adage is that it's better to be safe than sorry. Unfortunately if we ignore preparedness now, we'll be sorry later when the next emergency strikes."

#### Mutated disease cause extinction

Discover ‘00 (“Twenty Ways the World Could End” by Corey Powell in Discover Magazine, October 2000, <http://discovermagazine.com/2000/oct/featworld>)

If Earth doesn't do us in, our fellow organisms might be up to the task. Germs and people have always coexisted, but occasionally the balance gets out of whack. The Black Plague killed one European in four during the 14th century; influenza took at least 20 million lives between 1918 and 1919; the AIDS epidemic has produced a similar death toll and is still going strong. From 1980 to 1992, reports the Centers for Disease Control and Prevention, mortality from infectious disease in the United States rose 58 percent. Old diseases such as cholera and measles have developed new resistance to antibiotics. Intensive agriculture and land development is bringing humans closer to animal pathogens. International travel means diseases can spread faster than ever. Michael Osterholm, an infectious disease expert who recently left the Minnesota Department of Health, described the situation as "like trying to swim against the current of a raging river." The grimmest possibility would be the emergence of a strain that spreads so fast we are caught off guard or that resists all chemical means of control, perhaps as a result of our stirring of the ecological pot. About 12,000 years ago, a sudden wave of mammal extinctions swept through the Americas. Ross MacPhee of the American Museum of Natural History argues the culprit was extremely virulent disease, which humans helped transport as they migrated into the New World.

### XT – Biodiversity Cuts

#### Budget cuts hamper species protection

NWF No Date (National Wildlife Foundation. http://www.nwf.org/Wildlife/Policy/Conservation-Funding.aspx)

Maintaining healthy wildlife populations, recovering endangered species, and restoring impaired ecosystems all require significant funding.

Unfortunately, the needs of wildlife conservation efforts far outstrip the financial resources currently available to federal, state, and tribal agencies.

Indeed, in the face of climate change, these needs and associated costs are expected to grow sharply.

This plight of wildlife has become **even more acute** in light of the current economic downturn, as many **natural resource agencies suffer budget cuts** that are affecting their abilities to meet critical wildlife conservation functions.

Much of the nation's important wildlife habitat is found on private lands, and the wildlife conservation community has found a growing interest among private landowners in working to protect important habitats and species on their lands. Such work, however, is often dependent on the provision landowner incentives to protect habitat and wildlife on their property, and these funds face the same economic pressures as funding to agencies.

### A2: Ex-Im Bank CP – Links to Politics

#### CP gets drawn into bitter Congressional battles

FOX ’12 (“Conservatives make it rough for business”. http://www.foxnews.com/us/2012/07/09/conservatives-make-it-rough-for-business/)

Conservative Republicans have roughed up the business community this year — and it's not over yet.

The U.S. Chamber of Commerce, the National Association of Manufacturers and major companies like Boeing Co. and Caterpillar Inc. all wanted quick reauthorization of the Export-Import Bank, which helps finance American companies' overseas sales. Congress had reaffirmed the independent federal agency some two dozen times since its creation in 1934. But this year it took months of pleas, briefings and negotiations to overcome conservative opposition.

### A2: Capital Flight DA

#### Non-unique and no internal link – developing nations are purposely sending capital out to stop inflation

WSJ ’11 (Wall Street Journal. “Investors Pull Out of Emerging Market Funds As Nations Battle Inflation". http://online.wsj.com/article/BT-CO-20110211-711044.html)

Major capital flows away from emerging-market assets carried on this week, **as measures** taken **to fight** inflation put a check on **developing nations'** rapidly-growing **economies**.

Coming out of the Lunar New Year, Chinese authorities announced an unexpectedly early rate hike, highlighting the trend toward tighter policies across the emerging world. Prior to that, Indonesia became the latest among EMs to raise rates, with analysts expecting more nations to follow through the course of the year.

"The softer demand for now [partly comes from] the fact that there are inflation pressures within emerging markets, and people are worried how economies will turn out," said Sandeep Tharian, credit strategist at Standard Chartered.

According to global fund tracker EPFR, investors withdrew another $3 billion out emerging-market equity funds for the week ended Feb. 9. That adds to the $7.02 billion pulled out in the prior week, which marked a three-year record in weekly redemptions. Developed-market funds attracted inflows for the sixth week in a row.

On a country level, the fear of softer Chinese demand weighed on Latin America Equity funds, which endured its largest weekly outflow since the second quarter last year.

Emerging-market bond funds also saw another week of outflows, with an 11-week high of $477 million taken out. While most of the redemptions came out of hard-currency funds, local-currency funds followed suit for the first time since the last week of May, with $67 million of outflows.

"It's been a general kicking of the tires and testing of assumptions since late in the fourth quarter [of last year]," said Cameron Brandt, global markets analyst at EPFR. "There seems to be less acceptance of momentum and investors are asking where's the value."

#### No internal link – most capital flight happens illegally

NYDN ’11 (NY Daily News. “India lost $128 billion in illicit capital outflow over the past decade”. December 15, 2011. <http://india.nydailynews.com/newsarticle/4eea34f10169a51d0c000000/india-lost-128-billion-in-illicit-capital-outflow-over-the-past-decade>)

A staggering $128 billion in capital illegally flowed out of India in the last decade, making the country the 15th largest victim of illicit financial outflows that cost developing countries $903 billion in 2009, a new study says.

The study comes as New Delhi announced it would bring out a white paper on black money stashed away in tax havens abroad. Indian Finance Minister Pranab Mukherjee Wednesday said the government will soon introduce a bill to strengthen anti-money laundering laws.

While $903 billion marks a drop from the $1.55 trillion that illicitly flowed out of the developing world in 2008, the study finds the decrease almost entirely attributable to the global financial crisis rather than any governance improvement or economic reforms.

"This is a breathtakingly large sum at a time when developing and developed countries alike are struggling to make ends meet," said Raymond Baker, director of research and advocacy organization Global Financial Integrity GFI.

"This report should be a wake up call to world leaders that more must be done to address these harmful outflows."

Entitled 'Illicit Financial Flows from Developing Countries over the Decade Ending 2009', the report tracks the amount of illegal capital flowing out of 157 developing countries from 2000 to 2009.

According to the report, the 20 biggest victims of illicit financial flows over the decade are: China $2.74 trillion, Mexico $504 billion, Russia $501 billion, Saudi Arabia $380 billion, Malaysia $350 billion, United Arab Emirates $296 billion, Kuwait $271 billion, Nigeria $182 billion, Venezuela $179 billion, Qatar $175 billion, Poland $162 billion, Indonesia $145 billion, the Philippines $142 billion, Kazakhstan $131 billion, India $128 billion, Chile $97.5 billion, Ukraine $95.8 billion, Argentina $95.8 billion, South Africa $85.5 billion and Turkey $79.1 billion.

#### No impact uniqueness – no funds for climate change adaptation infrastructure for developing nations

Fiona Harvey, Guardian, January 2, 2012, “Developed world failing on climate funds pledge, says Bangladeshi minister” http://www.guardian.co.uk/environment/2012/jan/02/climate-change-funds-bangladesh-moni

Dipu Moni criticises 'dismal' efforts to deliver billions of pounds in aid to help poorer countries cope with environmental change

Efforts by developed countries to redistribute promised funds to help poorer parts of the world avoid environmental disasters have been described as "dismal" by the foreign minister of Bangladesh.

Dipu Moni said wealthier nations must begin immediately delivering the billions of pounds' worth of aid they have earmarked for climate change projects. "Our achievements – social, economic, environmental – of the past decades will be reversed if [rich countries] take away the funds promised for adapting to climate change," she said in an interview. "The disbursement of the financing has been dismal so far. We are not seeing the funds."

## \*\*\*PPP Advantage

### PPP Advantage – Space [SPSSSS] Addon – 2AC

#### P3s key to SPS – they fill in gaps in government budgets

Taylor 8 (Tom, Lunar Transportation Systems, Vice president and senior member, “Outreach Development Public Private Partnership for Space Exploration”, <http://tinyurl.com/Outreach-Development-Public-Pr>)

Continuing innovation and technology development is one way a global leader nation defines itself. Both happen in war and can happen in peace, if we think like President Lincoln. Innovation adds new dimensions to technology and sometimes comes from unexpected avenues. Innovation and how to stimulate it plus finance it is the subject of this paper. The opportunities available to mankind in the exploration of the universe are bigger than the Louisiana Purchase, and space commerce generally brings innovation and reduces costs in a competitive marketplace. Public Private Partnerships (PPP) are one method of expanding the money available to develop the opportunities. President Lincoln started the Transcontinental Railroad during our most costly war and it accelerated the development of the American West. Space exploration is a milestone for our species of a magnitude and opportunities never before encountered. Lincoln chose to stimulate others to finance the transportation into the American West by leapfrogging into building a railroad to the Pacific. America must again innovate, leapfrog our technology and build the partnerships plus the hardware stimulated by innovation and private investment to come forward and fill in the “gaps” in government space budgets. Space exploration innovation must energize our American economic engine and to “be what we can be.” We need to start the big projects that are not getting start by government space budgets alone. This innovation includes collecting energy in space for Earth use, developing trade routes beyond our home planet, joining nations to build projects, combining global government capabilities to solve climate problems and to use our resources in a peaceful manner, which is done everyday by global commerce. Society expects space tourism to produce low costs quickly, but entrepreneurs/financers need larger commercial markets on which bankers are comfortable. What are some examples of innovation that might impact our problems/solutions? Space Based Solar Power is perceived as so large and expensive everybody is scared to touch it for fear their budgets will be changed, yet it has become near term and very “GREEN” in its solution. Congress waits until problems are so large that massive solutions are forced instead of solving problems in a planned manner. Lunar bases are orders of magnitude more remote than bases on Earth, but lessons learned like the North Slope of Alaska can teach us about our first trade route beyond Earth including logistics and private financial development techniques. Within PPPs, government stretches space budgets, increases vehicle innovation without cost, with less cost to the taxpayers, and gains cost advantages of larger markets. This paper explores innovation and PPPs to bring governments and innovation together to stimulate financing to flourish in a world of dwindling resources. History will view lunar trade routes as a slow start after the Apollo landings in 1969, but the commerce possible from an evolving, affordable, two directional, sustainable trade route will definitely be a part of it, with at least one early transportation native financed privately to remain in operation after NASA moves on to explore the universe.

#### SPS solves great power war

NSSO, 7 (National Security Space Office, Report to the Director, “Space-Based Solar Power As an Opportunity for Strategic Security; Phase 0 Architecture Feasibility Study” October 10, 2007, http://www.nss.org/settlement/ssp/library/final-sbsp-interim-assessment-release-01.pdf)

FINDING: The SBSP Study Group found that SBSP offers a long‐term route to alleviate the security challenges of energy scarcity, and a hopeful path to avert possible wars and conflicts.

If traditional fossil fuel production of peaks sometime this century as the Department of Energy’s own Energy Information Agency has predicted, a first order effect would be some type of energy scarcity. If alternatives do not come on‐line fast enough, then prices and resource tensions will increase with a negative effect on the global economy, possibly even pricing some nations out of the competition for minimum requirements. This could increase the potential for failed states, particularly among the less developed and poor nations. It could also increase the chances for great power conflict. To the extent SBSP is successful in tapping an energy source with tremendous growth potential, it offers an “alternative in the third dimension” to lessen the chance of such conflicts.

### PPP Advantage – Space [Col] Addon – 2AC

#### P3s key to space exploration – they fill in gaps in government budgets

Taylor 8 (Tom, Lunar Transportation Systems, Vice president and senior member, “Outreach Development Public Private Partnership for Space Exploration”, <http://tinyurl.com/Outreach-Development-Public-Pr>)

Continuing innovation and technology development is one way a global leader nation defines itself. Both happen in war and can happen in peace, if we think like President Lincoln. Innovation adds new dimensions to technology and sometimes comes from unexpected avenues. Innovation and how to stimulate it plus finance it is the subject of this paper. The opportunities available to mankind in the exploration of the universe are bigger than the Louisiana Purchase, and space commerce generally brings innovation and reduces costs in a competitive marketplace. Public Private Partnerships (PPP) are one method of expanding the money available to develop the opportunities. President Lincoln started the Transcontinental Railroad during our most costly war and it accelerated the development of the American West. Space exploration is a milestone for our species of a magnitude and opportunities never before encountered. Lincoln chose to stimulate others to finance the transportation into the American West by leapfrogging into building a railroad to the Pacific. America must again innovate, leapfrog our technology and build the partnerships plus the hardware stimulated by innovation and private investment to come forward and fill in the “gaps” in government space budgets. Space exploration innovation must energize our American economic engine and to “be what we can be.” We need to start the big projects that are not getting start by government space budgets alone. This innovation includes collecting energy in space for Earth use, developing trade routes beyond our home planet, joining nations to build projects, combining global government capabilities to solve climate problems and to use our resources in a peaceful manner, which is done everyday by global commerce. Society expects space tourism to produce low costs quickly, but entrepreneurs/financers need larger commercial markets on which bankers are comfortable. What are some examples of innovation that might impact our problems/solutions? Space Based Solar Power is perceived as so large and expensive everybody is scared to touch it for fear their budgets will be changed, yet it has become near term and very “GREEN” in its solution. Congress waits until problems are so large that massive solutions are forced instead of solving problems in a planned manner. Lunar bases are orders of magnitude more remote than bases on Earth, but lessons learned like the North Slope of Alaska can teach us about our first trade route beyond Earth including logistics and private financial development techniques. Within PPPs, government stretches space budgets, increases vehicle innovation without cost, with less cost to the taxpayers, and gains cost advantages of larger markets. This paper explores innovation and PPPs to bring governments and innovation together to stimulate financing to flourish in a world of dwindling resources. History will view lunar trade routes as a slow start after the Apollo landings in 1969, but the commerce possible from an evolving, affordable, two directional, sustainable trade route will definitely be a part of it, with at least one early transportation native financed privately to remain in operation after NASA moves on to explore the universe.

Solves all extinction scenarios.

Baum 09 – (2009, Seth, visiting scholar at Columbia University's Center for Research on Environmental Decisions, PhD candidate in Geography with a focus on risk analysis, “Cost–benefit analysis of space exploration: Some ethical considerations,” Space Policy Volume 25, Issue 2, May 2009, Pages 75-80, science direct Ajones)

Another non-market benefit of space exploration is reduction in the risk of the extinction of humanity and other Earth-originating life. **Without space colonization, the survival of humanity and other Earth-originating life becomes extremely difficult- perhaps impossible-** over the very long-term. This is because the Sun, like all stars, changes in its composition and radiative output over time. The Sun is gradually converting hydrogen into helium, thereby getting warmer. In approximately 500 million to one billion years, this warming is projected to render Earth uninhabitable to life as we know it [25–26]. Humanity, if it still exists on Earth then, could conceivably develop technology by then to survive on Earth despite these radical conditions. Such technology may descend from present proposals to “geoengineer” the planet in response to anthropogenic climate change [27–28].3 However, the Sun later- approximately seven billion years later- loses mass that spreads into Earth’s orbit, causing Earth to slow, be pulled into the Sun, and evaporate. The only way life could survive on Earth may be if Earth, by sheer coincidence (the odds are on the order of one in 105 to one in 106 [29]) happens to be pulled out of the solar system by a star system that passes by. This process might enable life to survive on Earth much longer, although the chance of this is quite remote. **While space colonization would provide a hedge against these very long-term astrological threats, it would also provide a hedge against the more immediate threats that face humanity and other species**. These threats include nuclear warfare, pandemics, anthropogenic climate change, and disruptive technology [30]. Because these threats would generally only affect life on Earth and not life elsewhere,4 self-sufficient space colonies would survive these catastrophes, enabling life to persist in the universe. For this reason, space colonization has been advocated as a means of ensuring long-term human survival [32–33]. Space exploration projects can help increase the probability of long-term human survival in other ways as well: technology developed for space exploration is central to proposals to avoid threats from large comet and asteroid impacts [34–35]. However, given the goal of increasing the probability of long-term human survival by a certain amount, there may be more cost-effective options than space colonization (with costs defined in terms of money, effort, or related measures). More cost-effective options may include isolated refuges on Earth to help humans survive a catastrophe [36] and materials to assist survivors, such as a how-to manual for civilization [37] or a seed bank [38]. Further analysis is necessary to determine the most cost-effective means of increasing the probability of long-term human survival.

### Gas/SPS Scenario – A2: No Resource Wars

#### ( ) Victor’s indicts are wrong

Homer-Dixon ‘8

Thomas Homer-Dixon currently holds the Centre for International Governance Innovation Chair of Global Systems at the Balsillie School of International Affairs in Waterloo, Ontario. National Interest – Jan-Feb 2008 – http://nationalinterest.org/article/straw-man-in-the-wind-1921

PUNDITS, JOURNALISTS and Sunday morning news show commentators sometimes say silly things about the links between resources and war. "Iraq is all about oil" or "Global warming caused the Darfur genocide." And, sometimes, NGO leaders and policymakers say similar silly things when they want the media to pay attention to a particular region or issue. It's easy to criticize these statements. But thoughtful commentators, of whom David Victor is normally one, know they contribute little by doing so. Yet, in this case, he's pulled together several oft-heard arguments about why threats from resource wars are overblown. Some of the skeptical positions have merit, but many are deeply misleading. No serious scholar of this issue says that resource stress causes violence by itself; almost none asserts that the causal links between resource stress and violence are direct; and very few argue that interstate war is the most likely outcome. Resource stresses are security dangers, though they are one among many. They will not be the only cause of conflict, but they will add to the risk of war. If you listen to Victor, though, you might just get lulled into a false sense of security. He beats down straw-man arguments, in the end offering nothing but false reassurances about the security risks posed by resource stress. If the author had been willing to take on nuance, he wouldn't have been able to write the kind of simplistic and ideologically charged article that appeared in these pages. That's because serious scholars who have spent years studying the links between resources and mass violence-and I count myself in that group-rarely, if ever, make the kinds of arguments Victor so boldly attacks.

#### ( ) Resource war thesis is accurate – history’s with us.

Klare ‘8

Michael Klare is a professor of peace and world security studies at Hampshire College – National Interest – Jan-Feb 2008 – http://nationalinterest.org/article/clearing-the-air-1922

Victor's missteps are partly methodological. He too narrowly defines "resource wars" as "hot conflicts triggered by a struggle to grab valuable resources." This classification severely underestimates the number of worldwide resource-driven battles. What's more, the sort of wars he depicts-the staple of European imperialism-may have become less frequent in the modern era, but they have hardly disappeared. Surely Saddam Hussein's August 1990 invasion of Kuwait fits his definition-a resource "grab" that was only reversed after intervention by a half-million U.S. troops. But this is not the type of resource conflict that has most troubled the planet in recent times. By failing to address the role of resource revenues as a motive for war, Victor leaves out a large share of the armed violence now racking the planet. In reality, we have experienced a spate of internal conflicts over control of valuable oil fields, copper mines and what Paul Collier has called "lootable resources"-diamonds, old-growth timber and other valuable commodities that can be smuggled out of the country and sold on lucrative foreign markets. Conflicts of this sort typically pit corrupt central governments against warlords, ethnic militias, separatist groups, criminal organizations and other non-state actors. Ultimately, each group seeks to garner the rents generated by ownership of the mines or oil fields in question or to monopolize the illicit trade in lootable commodities.

### Cybersecurity Scenario – A2: Impact Defense

#### None of their impact defense assumes Stuxnet

CLAYTON ‘10 (Stuxnet 'virus' could be altered to attack US facilities, report warns, December 12, 2010, http://www.csmonitor.com/USA/2010/1215/Stuxnet-virus-could-be-altered-to-attack-US-facilities-report-warns)

Stuxnet, a computer worm that hit and may have severely damaged Iranian nuclear facilities, is the type of cyberweapon that could broadly harm the United States, undermining both society and government ability to defend the nation, says a strongly worded report to Congress. A successful broad-based attack on the US, using new variants of the Stuxnet weapon, could do enough widespread damage to critical infrastructure – including water, power, transportation, and other services – that it "threatens to cause harm to many activities deemed critical to the basic functioning of modern society," said the little-noticed report issued by the Congressional Research Service (CRS) Dec. 9. If retooled slightly, Stuxnet could be directed to target a wide swath of critical infrastructure facilities, rather than a narrow target such as Iran's nuclear fuel-enrichment facilities and nuclear power plant, the eight-page CRS synopsis warns, quoting researchers and other analysts. IN PICTURES: Who has nukes? "Depending on the severity of the attack, the interconnected nature of the affected critical infrastructure facilities, and government preparation and response plans, entities and individuals relying on these facilities could be without life sustaining or comforting services for a long period of time," the study's summary states. "The resulting damage to the nation’s critical infrastructure could threaten many aspects of life, including the government’s ability to safeguard national security interests." Terrorist groups, previously deemed not to have much independent ability to launch damaging cyberattacks, could potentially purchase or even rent a Stuxnet-based variant from organized crime groups to launch an infrastructure attack on the US, the report warns. While some experts say the "cyber threat to critical infrastructure is exaggerated, regardless of the perpetrators’ capabilities," most such skepticism has been general in nature and does not factor in the new Stuxnet cyberweapon, the report says. The report quotes Dr. Udo Helmbrecht, executive director of the European Network and Information Security Agency, as saying in October that “Stuxnet is really a paradigm shift, as Stuxnet is a new class and dimension of malware." He went on to call it a "first strike" weapon that is "one of the first organized, well prepared attacks against major industrial resources. This has tremendous effect on how to protect national (critical infrastructure) in the future.”

### SPS Scenario – A2: SPS Fails

#### We can develop SPS – need coordination between government agencies and the industry

NSSO 7

National Security Space Office, Report to the Director, 10-10-2007, “Space-Based Solar Power As an Opportunity for Strategic Security; Phase 0 Architecture Feasibility Study,” NSS, http://www.nss.org/settlement/ssp/library/final-sbsp-interim-assessment-release-01.pdf

FINDING:  The SBSP Study Group found that SBSP development over the past 30 years has made little progress because it “falls between the cracks” of currently‐defined responsibilities of federal bureaucracies, and has lacked an organizational advocate within the US Government. The current bureaucratic lanes are drawn in such a way to exclude the likelihood of SBSP development. NASA’s charter and focus is clearly on robotic and human exploration to execute - 25 - the Moon‐Mars Vision for Space Exploration, and is cognizant that it is not America’s Department of Energy (DOE). DOE rightly recognizes that the hard challenges to SBSP all lie in spacefaring activities such as space access, and space‐to‐Earth power‐beaming, none of which are its core competencies, and would make it dependent upon a space‐capable agency. The Office of Space Commercialization in the Department of Commerce is not sufficiently resourced for this mission, and no dedicated Space Development Agency exists as of yet. DoD has much of the necessary development expertise in‐house, and clearly has a responsibility to look to the long term security of the United States, but it is also not the country’s Department of Energy, and must focus itself on war prevention and warfighting concerns. A similar problem exists in the private sector. US space companies are used to small launch markets with the government as a primary customer and advocate, and do not have a developed business model or speak in a common language with the energy companies. The energy companies have adequate capital and understand their market, but do not understand the aerospace sector. **One requires a demonstrated market,** while **the other requires a demonstrated technical capability**. **Without a trusted agent** to mediate the collaboration and serve as an advocate for supportive policy, progress is likely to be slow. o Recommendation: The SBSP Study Group recommends that the US Government re‐order roles and responsibilities to specify SBSP an development champion; one option might included a dedicated sole‐purpose organization. FINDING: The SBSP Study Group found that no existing U.S. federal agency has a specific mandate to invest in the development of Space‐Based Solar Power. • Lacking a specific mandate and clear responsibility, no U.S. federal agency has an existing or planned program of research, technology investment, or development related to Space‐Based Solar Power. Instead, the responsibilities for various aspects of SBSP are **distributed among various federal agencies**. o Recommendation: The SBSP Study Group recommends that the US Government should **form a SBSP** Partnership **Council that consists of all federal agencies** with responsibilities relevant to successfully developing SBSP. The SBSP Partnership Council must be chaired and led by an existing or newly created single‐purpose civilian federal agency.

# \*\*\*Neg\*\*\*

### Death Penalty Addon Defense – 2NC

#### Alt cause - Doctrine of Discriminatory intent

Lucy Adams, 2005 (Bachelor of Laws, University of Melbourne, Summer 2005, “Death By Discretion: Who Decides Who Lives and Dies in the United States of America?” Lexis/Nexis, rwg)

The decision in McCleskey has been described as "a badge of shame upon America's system of justice ... [and] a manifestation of indifference on the part of the Court to secure justice for racial minorities." [n74](http://www.lexisnexis.com.ezproxy.samford.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1342982478941&returnToKey=20_T15176132283&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.780000.5734116802" \l "n74) The majority opinion stated that for McCleskey to prevail under the Equal Protection Clause he needed to present "exceptionally clear proof" [n75](http://www.lexisnexis.com.ezproxy.samford.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1342982478941&returnToKey=20_T15176132283&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.780000.5734116802" \l "n75) that "decisionmakers in his case acted with discriminatory purpose." [n76](http://www.lexisnexis.com.ezproxy.samford.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1342982478941&returnToKey=20_T15176132283&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.780000.5734116802" \l "n76) The Court held that he had offered "no evidence specific to his own case" [n77](http://www.lexisnexis.com.ezproxy.samford.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1342982478941&returnToKey=20_T15176132283&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.780000.5734116802" \l "n77) in support of the inference that racial considerations played a part in his sentence; and a fifty-one percent disparity between the capital prosecutions for crimes involving white victims and those involving black was apparently not "stark" enough to be accepted as proof of discriminatory intent. [n78](http://www.lexisnexis.com.ezproxy.samford.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1342982478941&returnToKey=20_T15176132283&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.780000.5734116802" \l "n78) Analogues have been drawn between this burden of proof and the insurmountable one established in Swain v. Alabama in 1965. [n79](http://www.lexisnexis.com.ezproxy.samford.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1342982478941&returnToKey=20_T15176132283&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.780000.5734116802" \l "n79) Swain has since been recognized as an indictment on the United States criminal justice system, and some may hope that the same fate awaits McCleskey. [n80](http://www.lexisnexis.com.ezproxy.samford.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1342982478941&returnToKey=20_T15176132283&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.780000.5734116802" \l "n80) In the interim, however, obsequiousness to the discretion of the prosecutor, and a phobia of disrupting "the heart of the State's criminal justice system" [n81](http://www.lexisnexis.com.ezproxy.samford.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1342982478941&returnToKey=20_T15176132283&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.780000.5734116802" \l "n81) shape the burden of proof required to establish discriminatory intent in the prosecutor's decision to seek the death penalty. This burden has subsequently been invoked by lower courts in a way that undermines the ability of defendants to challenge their capital prosecution under the  [\*395]  "ordinary equal protection standards" requiring a showing that it "had a discriminatory effect and that it was motivated by a discriminatory purpose." [n82](http://www.lexisnexis.com.ezproxy.samford.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1342982478941&returnToKey=20_T15176132283&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.780000.5734116802" \l "n82) It has served to deprive defendants of any means of judicial redress in the face of the race-based selective prosecution that it is all too obvious.

**No Impact to nuclear terrorism – no way they could acquire the material**

**Mearsheimer 11,**January, John J., Wendell Harrison Distinguished Service Professor of Political Science at the University of Chicago. He is on the Advisory Council of The National Interest, “Imperial by Design,”<http://nationalinterest.org/article/imperial-by-design-4576?page=3>,

The fact is that states have strong incentives to distrust terrorist groups, in part because they might turn on them someday, but also because countries cannot control what terrorist organizations do, and they may do something that gets their patrons into serious trouble. This is why there is hardly any chance that a rogue state will give a nuclear weapon to terrorists. That regime’s leaders could never be sure that they would not be blamed and punished for a terrorist group’s actions. Nor could they be certain that the United States or Israel would not incinerate them if either country merely suspected that they had provided terrorists with the ability to carry out a WMD attack. A nuclear handoff, therefore, is not a serious threat. When you get down to it, there is only a remote possibility that terrorists will get hold of an atomic bomb. The most likely way it would happen is if there were political chaos in a nuclear-armed state, and terrorists or their friends were able to take advantage of the ensuing confusion to snatch a loose nuclear weapon. But even then, there are additional obstacles to overcome: some countries keep their weapons disassembled, detonating one is not easy and it would be difficult to transport the device without being detected. Moreover, other countries would have powerful incentives to work with Washington to find the weapon before it could be used. The obvious implication is that we should work with other states to improve nuclear security, so as to make this slim possibility even more unlikely. Finally, the ability of terrorists to strike the American homeland has been blown out of all proportion. In the nine years since 9/11, government officials and terrorist experts have issued countless warnings that another major attack on American soil is probable—even imminent. But this is simply not the case.3 The only attempts we have seen are a few failed solo attacks by individuals with links to al-Qaeda like the “shoe bomber,” who attempted to blow up an American Airlines flight from Paris to Miami in December 2001, and the “underwear bomber,” who tried to blow up a Northwest Airlines flight from Amsterdam to Detroit in December 2009. So, we do have a terrorism problem, but it is hardly an existential threat. In fact, it is a minor threat. Perhaps the scope of the challenge is best captured by Ohio State political scientist John Mueller’s telling comment that “the number of Americans killed by international terrorism since the late 1960s . . . is about the same as the number killed over the same period by lightning, or by accident-causing deer, or by severe allergic reactions to peanuts.”

Retaliation is impossible

Dowle 5 (Marke, Graduate School of Journalism – University of California, Berkeley, California Monthly, September, http://www.alumni.berkeley.edu/Alumni/Cal\_Monthly/September\_2005/COVER\_STORY-\_Berkeleys\_Big\_Bang\_Project\_.asp)

Because terrorists tend to be stateless and well hidden, immediate retaliation in kind is almost impossible. But some nuclear explosions do leave an isotopic signature, a DNA-like fingerprint that allows forensic physicists such as Naval Postgraduate School weapons systems analyst Bob Harney to possibly determine the origin of the fissile material in the bomb. Nuclear forensics is not a precise science, Harney warns. Post-attack sites are almost certain to be contaminated with unrelated or naturally occurring radioactivity, and there are numerous, highly enriched uranium stashes in the world with unknown signatures. But there is no question, according to Peter Huessy, a member of the Committee on the Present Danger and consultant to the National Defense University in Washington, D.C., that Russian forensic experts could quickly detect Russian isotopes, and that highly enriched uranium (HEU) from, say, France could readily be differentiated from American HEU. But, Huessy warns, distinguishing post-blast residues of Pakistani uranium from North Korean uranium would be more challenging, probably impossible. Because neither country is a member of the International Atomic Energy Agency, IAEA inspectors have been unable to collect from their facilities reliable isotope samples that could be compared to post-attack residues. Even if the uranium were traced, the source nation could claim that the material had been stolen.

### Disease Addon Defense – 2NC

#### No extinction

Gladwell 99 (Malcolm, The New Republic, July 17 and 24, 1995, excerpted in Epidemics: Opposing Viewpoints, p. 31-32)

Every infectious agent that has ever plagued humanity has had to adapt a specific strategy but every strategy carries a corresponding cost and this makes human counterattack possible. Malaria is vicious and deadly but it relies on mosquitoes to spread from one human to the next, which means that draining swamps and putting up mosquito netting can all hut halt endemic malaria. Smallpox is extraordinarily durable remaining infectious in the environment for years, but its very durability its essential rigidity is what makes it one of the easiest microbes to create a vaccine against. AIDS is almost invariably lethal because it attacks the body at its point of great vulnerability, that is, the immune system, but the fact that it targets blood cells is what makes it so relatively uninfectious. Viruses are not superhuman. I could go on, but the point is obvious. **Any microbe capable of wiping us all out would have to be everything at once**: as contagious as flue, as durable as the cold, as lethal as Ebola, as stealthy as HIV and so doggedly resistant to mutation that it would stay deadly over the course of a long epidemic. **But viruses are not**, well, **superhuman. They cannot do** **everything at once**. It is one of the ironies of the analysis of **alarmists** such as Preston that they are all too willing to point out the limitations of human beings, but they **neglect** to point out **the limitations of microscopic life forms**.

#### Disease inevitable

Sky News 8 (“Warning Over Deadly New Diseases”, 7-21, http://news.sky.com/skynews/Home/Health/New-Disease-Emerges-Every-Year-Pandemic-Outbreak-May-Not-Be-Stopped/Article/200807315047567)

In a highly critical new report, the committee said there was an "urgent need" for a better global surveillance system to identify diseases before they infect large numbers of people. It noted that **three-quarters of newly-emerging human infections come from animals** - but found **many are only detected once they have made humans ill**. Experts estimate a devastating pandemic outbreak of a new disease such as SARS or the H5N1 strain of flu could claim anything between two and 50 million lives. In evidence to the House of Lords Intergovernmental Organisations Committee inquiry, the Government said there had been no pandemic disease outbreaks since 1968. However, it warned **another pandemic outbreak was "**inevitable**"**. Committee chairman Lord Soley said: "**The last 100 years have seen great advances in public health and disease control through the world, but globalisation and changes in lifestyles are giving rise to new infections and providing opportunities for them to spread rapidly throughout the world.**

#### Burn out stops disease

Lederberg 99 (Joshua, Professor of Genetics – Stanford University School of Medicine, Epidemic The World of Infectious Disease, p. 13)

The toll of the fourteenth-century plague, the "Black Death," was closer to one third. If the bugs' potential to develop adaptations that could kill us off were the whole story, we would not be here. However, with very rare exceptions, our **microbial adversaries have a shared interest in our survival**. Almost **any pathogen comes to a dead end when we die; it first has to communicate itself to another host in order to survive. So historically, the really severe host- pathogen interactions have resulted in a wipeout of both host and pathogen**. We humans are still here because, so far, the **pathogens** that have attacked us have willy-nilly **had an interest in our survival**. This is a very delicate balance, and it is easily disturbed, often in the wake of large-scale ecological upsets.

## \*\*\*PPP Advantage

### PPP – 1NC

#### The NIB’s regulatory red tape fosters distrust between sectors, ending any chance at PPP’s – ridiculously comprehensive model proves

Philippe et al., President and Fellows of Harvard College and the Massachusetts Institute of Technology, 2010

(8-10, http://www.economics.harvard.edu/faculty/shleifer/files/regulation\_trust\_qje.pdf, “Regulation and Distrust”, TVB)

We document that, in a cross section of countries, government regulation is strongly negatively correlated with measures of trust. In a simple model explaining this correlation, distrust creates public demand for regulation, whereas regulation in turn discourages formation of trust, leading to multiple equilibria. A key implication of the model is that individuals in low-trust countries want more government intervention even though they know the government is corrupt. We test this and other implications of the model using country- and individual-level data on trust and beliefs about the role of government, as well as on changes in beliefs during the transition from socialism. In a cross section of countries, government regulation is strongly negatively correlated with trust. We document and try to explain this highly significant empirical correlation. The correlation works for a range of measures of trust, from trust in others to trust in corporations and political institutions, as well as for a range of measures of regulation from product markets to labor markets. We present a simple model explaining this correlation. We think of trust as beliefs resulting from decisions about civicness made in families.1 Individuals make two decisions: whether or not to become civic, and whether to become entrepreneurs or choose routine (perhaps state) production. Those who become uncivic impose a negative externality on others when they become entrepreneurs (e.g., pollute), whereas those who become civic do not. The community (through voting or some other political mechanism) regulates entry into entrepreneurial activity when the expected negative externalities are large. Regulation constrains choices and hence negative externalities. But regulation itself is implemented by government officials, who demand bribes when they are not civic.¶ In this model, when people expect to live in a civic community, they expect low levels of regulation and corruption, and so become civic. Their beliefs are justified, and their choices lead to civicness, low regulation, and high levels of entrepreneurial activity. When in contrast people expect to live in an uncivic community, they expect high levels of regulation and corruption, and do not become civic. Their beliefs again are justified, as their choices lead to uncivicness, high regulation, high corruption, and low levels of entrepreneurial activity. The model has two equilibria: a good one with a large share of civic individuals and no regulation, and a bad one where a large share of uncivic individuals support heavy regulation.

**PPPs create lopsided allocation of risks that hurts the public sector**

**Dutzik et all 11** (Tony Dutzik, Senior Policy Analyst with Frontier Group specializing in energy, transportation, and climate policy, holds an M.A. in print journalism from Boston University and a B.S. in public service from Penn State University Jordan Schneider is an analyst in the Frontier Group Santa Barbara office. Before joining Frontier Group in the fall of 2010, she worked as a reporter, page designer and copy editor for small newspapers in both southeastern Alabama and in Colorado. In 2008, she wrote grants for the Catamount Institute in Colorado Springs, Co., and worked as a communications assistant for the Gulf Restoration Network in New Orleans. She has a strong interest in conservation and natural resources management issues, especially concerning the American tropics and the U.S. Gulf Coast. She completed independent studies in coastal Ecuador in 2009. Jordan is a 2008 summa cum laude graduate of Loyola University New Orleans. She majored in print journalism.Phineas Baxandall is the Senior Policy Analyst for Tax and Budget issues for U.S. PIRG Education Fund. He Mr. Baxandall is a leading expert in his field and has appeared on numerous talk shows and conducted studio interviews and debates for outlets such as CNN, MSNBC, Fox and PBS. His op-eds have appeared in dozens of newspapers across the country and he has been quoted in numerous publications such as the New York Times and the Economist. He often presents at conferences and has been invited to testify before state legislatures, Congress, and the U.S. Department of Transportation. His blogs appear often on the National Journal Transportation Expert blog and on Huffington Post. He serves on the executive board of the transportation coalition Transportation for America, as well as the privatization study group, In the Public Interest. Summer 2011 “High-Speed Rail: Public, Private or Both? Assessing the Prospects, Promise and Pitfalls of Public-Private Partnerships” <http://cdn.publicinterestnetwork.org/assets/85a40b6572e20834e07b0da3e66e98bf/HSR-PPP-USPIRG-July-19-2011.pdf> AB)

Governments that engage in PPPs often do so in the hope of sharing the risks of a project with a private partner. However, **the very nature of PPPs often leads to a lopsided allocation of risks that leaves the public sector on the hook when unexpected problems arise in a project**. **Public and private entities come to PPPs with inherently different motivations**: **the government to deliver a given infrastructure project** **on time** and with the lowest possible public outlay, **and the private partner to maximize profit**. The initial negotiation of the contract is the time at which the public sector has maximum leverage, with the ability to choose the best of a competing set of bids from private entities. **Once a PPP bidder is chosen and a contract is signed, however, the balance of power shifts. The government entity remains accountable to the public for delivering the project on time**, and becomes dependent on the private partner to meet that objective, giving the private partner leverage in subsequent renegotiations of the contract. Once a project is initiated, **the ultimate source of leverage for a private sector firm is the threat that the entity will go bankrupt or walk away from a project**—leaving the governmental partner with an unfinished infrastructure project it may be ill-equipped to complete. **Once a project is seen as moving forward, decision-makers will make budgetary and infrastructure plans under the assumption that the PPP will be completed, increasing the disruption and costs for the government side to exit the process**. **Poorly written PPP contracts may give private-sector partners other points of leverage**: including the ability to slow down work or change the terms of delivery of the high-speed rail service. Even in cases where the language of a PPP contract may appear to be clear-cut, **the mere threat of protracted litigation, arbitration or delays** **may be enough to force concessions from the government.** This situation—known as “lock-in” 27—is not dissimilar to the situation faced by the U.S. government during the financial crisis of 2008, in which the government faced the difficult choice of bailing out banks or allowing them to fail, risking the onset of a second Great Depression. **When PPP projects become “too big to fail”—or when it is too difficult to replace an incumbent firm mid-project**—then risks that the public sector thought it was avoiding may instead be magnified. Lock-in is a particular problem with high-speed rail PPPs because ren**egotiation of contracts is so common. High-speed rail projects are incredibly complex, meaning that it is nearly impossible for contract writers to anticipate every possible condition that will arise over the course of the project.** When circumstances change and contracts must be renegotiated, new opportunities emerge for private firms to exert leverage over their public sector partners.28 **There are ways to reduce the threat of lock-in.** **One is to eschew PPPs for projects that are too big or too important to fail.**29 Another is to structure PPPs in such a way as to ensure that **no individual vendor becomes indispensible to the project**. In addition, **PPP contracts can be written to require private-sector actors to post bonds guaranteeing completion of the project,**30 to purchase insurance or establish escrow accounts against certain risks, to create clear expectations for which parties are responsible for certain types of unanticipated changes (e.g. changes in applicable safety standards), and to establish clear processes for dispute resolution and contract renegotiation. Monitoring and Complexity

#### PPP’s not key to energy independence – the free market already solved

YDSTIE ’12 - host and correspondent at National Public Radio (Ydstie, John. “Is U.S. Energy Independence Finally Within Reach?”. March 7, 2012. http://www.npr.org/2012/03/07/148036966/is-u-s-energy-independence-finally-within-reach)

"Energy self-sufficiency is now in sight," says energy economist Phil Verleger. He believes that within a decade, the U.S. will no longer need to import crude oil and will be a natural gas exporter.

Verleger says all of the previous presidents fighting for energy independence would be quite surprised by how this came about: It's not the result of government policy or drilling by big oil.

"This is really the classic success of American entrepreneurs," he says. "These were people who saw this coming, managed to assemble the capital and go ahead."

Small energy companies using such controversial techniques as hydraulic fracturing, along with horizontal drilling, are unlocking vast oil and natural gas deposits trapped in shale in places like Pennsylvania, North Dakota and Texas. North Dakota, for instance, now produces a half-million barrels a day of crude oil, and production is rising.

Amy Myers **Jaffe, of Rice** University's Baker Institute, also **believes** U.S. energy self-sufficiency is within reach.

"I would say we're the closest to being able to fashion a policy that would get us to energy self-sufficiency in decades," she says.

That policy would include continuing the green light on developing shale oil and gas, she says, while making sure it is done in an environmentally safe manner and continuing to require higher fuel efficiency in cars and trucks.

"This shale gale, I describe it as the energy equivalent of the Berlin Wall coming down. This is a big deal," says Robin West, chairman and CEO of PFC Energy, who has been in the energy consulting business for decades.

"We estimate that by 2020, the U.S. overall will be the largest hydrocarbon producer in the world; bigger than Russia or Saudi Arabia," he says.

#### Their internal link to energy dependence is exaggerated

MULLANEY ’12 – USA Today Staff Writer (Mullaney, Tim. “U.S. energy independence is no longer just a pipe dream”. May 15, 2012. <http://www.usatoday.com/money/industries/energy/story/2012-05-15/1A-COV-ENERGY-INDEPENDENCE/54977254/1>)

Yet many hopes — and fears — about the U.S. energy boom will likely prove exaggerated.

Citi's thesis that gas and oil will stay cheaper in the U.S. than abroad, for example, **assumes most exports** of U.S. crude remain illegal and natural-gas exports **stay rare, says** Mark **Zandi**, chief economist **at** **Moody's** Analytics. Instead, U.S. crude is likely to be refined into exportable products such as gasoline, while infrastructure to export liquefied natural gas improves. Both will pull U.S. prices toward higher world levels, he says.

"Markets have a wonderful way of finding their way around restrictions when there's money to be made," Zandi says.

Williamsport exemplifies the likeliest impact of all. With natural-gas prices so low, drilling **has all but halted**. But gas companies are using the lull to build pipelines, as drilling action moves to oil patches in Western Pennsylvania.

#### ( ) Resource war thesis is false

Victor ‘8

David Victor is Director of the Laboratory on International Law and Regulation (ILAR) at UC-San Diego. Looking across a wide array of issues from environment and energy to human rights, trade and security, the Laboratory explores when (and why) international laws actually work.

National Interest – Jan-Feb 2008 –

http://nationalinterest.org/article/smoke-and-mirrors-1924

MY ARGUMENT is that classic resource wars-hot conflicts driven by a struggle to grab resources-are increasingly rare. Even where resources play a role, they are rarely the root cause of bloodshed. Rather, the root cause usually lies in various failures of governance. That argument-in both its classic form and in its more nuanced incarnation-is hardly a straw man, as Thomas Homer-Dixon asserts. Setting aside hyperbole, the punditry increasingly points to resources as a cause of war. And so do social scientists and policy analysts, even with their more nuanced views. I've triggered this debate because conventional wisdom puts too much emphasis on resources as a cause of conflict. Getting the story right has big implications for social scientists trying to unravel cause-and-effect and often even larger implications for public policy.

#### PPPs can’t solve cyber-security – the industry fails

FCW ’12 (Federal Computer Week. “Industry cybersecurity efforts fall short, experts say”. March 29, 2012. http://fcw.com/articles/2012/03/29/house-cybersecurity-hearing.aspx)

Industry-led cybersecurity efforts have so far been inadequate to protect networks on which the nation’s economy and security increasingly depend, according to a **panel of federal officials**, writes Bill Jackson at GCN.com.

James Barnett Jr., chief of the Federal Communications Commission’s Public Safety and Homeland Security Bureau, called network operators the first line of defense and praised their efforts before a House Energy and Commerce subcommittee.

But “it’s not working,” Barnett said. “We wouldn’t be here talking about it if it were. No one would tolerate this level of criminality, thievery, vandalism or invasion of property if it was done in the physical world, and we can no longer afford to tolerate it in cyberspace.”

#### No risk of cyberterrorism

Knake ’10 (Robert K. Knake, an internationally-recognized expert on security, including homeland security, national security, cyber security, and counterterrorism. He is currently an on-air consultant for ABC News and teaches at Harvard's Kennedy School of Government. Clarke served the last three Presidents as a senior White House Advisor. Over the course of an unprecedented 11 consecutive years of White House service, he held the titles of: - Special Assistant to the President for Global Affairs - National Coordinator for Security and Counterterrorism - Special Advisor to the President for Cyber Security Prior to his White House years, Clarke served for 19 years in the Pentagon, the Intelligence Community, and State Department. During the Reagan Administration, he was Deputy Assistant Secretary of State for Intelligence. During the Bush (41) Administration, he was Assistant Secretary of State for Political-Military Affairs and coordinated diplomatic efforts to support the 1990–1991 Gulf War and the subsequent security arrangements. As a Partner in Good Harbor Consulting, LLC, Clarke advises clients on a range of issues including: - Corporate security risk management - Information security technology - Dealing with the Federal Government on security and IT issues - Counterterrorism In a Special Report by Foreign Policy Magazine, Clarke was chosen as one of The Top 100 Global Thinkers of 2010, Council on Foreign Relations, Former international affairs fellow in residence, “Cyberterrorism Hype v. Fact”, <http://www.cfr.org/terrorism-and-technology/cyberterrorism-hype-v-fact/p21434>, February 16, 2010, LEQ)

In the last ten years, according to the National Counterterrorism Center's Worldwide Incidents Tracking Database [NCCWITD], there have been 63,192 incidents of terrorism. Not one was an incident of cyberterrorism. As Irving Lachow at NDU has pointed out, the jihadist community heavily relied on one London-based hacker known by the moniker Irhabi 007, who at best had moderate ability. Since his arrest in 2005, indications are that al-Qaeda's cybercapabilities have only eroded. While continuing to rely on petty crime to fund many plots, al-Qaeda has been unable to capitalize on the explosion of cybercrime, lacking the technical capability to do so. For al-Qaeda to do any real damage with cyberattacks, it would need to make a multi-year investment in developing offensive cybercapabilities and would need a secure facility and advance test bed from which to do it. Understanding the control software for an electric grid is not a widely available skill. It is one thing to find a way to hack into a network and quite another to know what to do once you're inside.

### PPP Fail – 2NC

**PPPs create monitoring and controlling issues**

**Dutzik et all 11** (Tony Dutzik, Senior Policy Analyst with Frontier Group specializing in energy, transportation, and climate policy, holds an M.A. in print journalism from Boston University and a B.S. in public service from Penn State University Jordan Schneider is an analyst in the Frontier Group Santa Barbara office. Before joining Frontier Group in the fall of 2010, she worked as a reporter, page designer and copy editor for small newspapers in both southeastern Alabama and in Colorado. In 2008, she wrote grants for the Catamount Institute in Colorado Springs, Co., and worked as a communications assistant for the Gulf Restoration Network in New Orleans. She has a strong interest in conservation and natural resources management issues, especially concerning the American tropics and the U.S. Gulf Coast. She completed independent studies in coastal Ecuador in 2009. Jordan is a 2008 summa cum laude graduate of Loyola University New Orleans. She majored in print journalism.Phineas Baxandall is the Senior Policy Analyst for Tax and Budget issues for U.S. PIRG Education Fund. He Mr. Baxandall is a leading expert in his field and has appeared on numerous talk shows and conducted studio interviews and debates for outlets such as CNN, MSNBC, Fox and PBS. His op-eds have appeared in dozens of newspapers across the country and he has been quoted in numerous publications such as the New York Times and the Economist. He often presents at conferences and has been invited to testify before state legislatures, Congress, and the U.S. Department of Transportation. His blogs appear often on the National Journal Transportation Expert blog and on Huffington Post. He serves on the executive board of the transportation coalition Transportation for America, as well as the privatization study group, In the Public Interest. Summer 2011 “High-Speed Rail: Public, Private or Both? Assessing the Prospects, Promise and Pitfalls of Public-Private Partnerships” <http://cdn.publicinterestnetwork.org/assets/85a40b6572e20834e07b0da3e66e98bf/HSR-PPP-USPIRG-July-19-2011.pdf> AB)

**PPP deals also create significant legal and monitoring costs for governments**. **Developing and implementing a PPP agreement requires the participation of an army of financial analysts, lawyers, and experts in infrastructure development**. Even after a contract is signed and work begins on a project, expert consultants are needed throughout the contract term to interpret the contract and potentially litigate to ensure that the private operator is upholding the terms of the deal. **These ongoing costs to government are rarely considered as part of the cost of a PPP project**. Coordination Issues Successful high-speed rail services are more than just trains running on tracks. They are the confluence of many systems— from power supply and train control to ticketing and station operations—all working together seamlessly. In traditional state-owned railways, these systems were designed and operated under a single corporate roof. **PPP-based project delivery plans, however, can include dozens of individual contracts for various pieces of the high-speed rail system. Failures of coordination among the various contract holders can result in unplanned costs or quality concerns.** Ensuring that contractors coordinate their efforts can also add another monitoring and enforcement burden for the government agency initiating the PPP project. In addition, **because high-speed rail is generally built one line at a time, rather than as a completed network, new lines must be integrated seamlessly into the broader network**. **Dividing the ownership or operations of multiple lines within a network among different firms has the potential to impose new challenges in ensuring that the system works as a cohesive whole.**

**PPPs have huge capital costs that takes away incentive for private companies**

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Potential Problems of PPPs High and Volatile Capital Costs Private companies have higher long-term borrowing costs than public entities. According to analysis by Dennis Enright at NW Financial Group, an investment bank, public sector costs in 2007 for raising capital through debt were a full 35 percent less than the lowest cost a private entity could hope to obtain.25 Other academic studies confirm these consistently higher private capital costs.26 And since the recession it has become relatively more expensive for the private sector to borrow capital compared with the public, with U.S. government debt remaining at near rock-bottom interest rates. Because government officials can issue tax-free bonds and bond traders are willing to accept lower interest rates on public bonds, deals based on private capital are inherently more expensive than public financing. When investors purchase stocks or other forms of equity in private infrastructure companies, they take on greater risk than if they purchase private infrastructure bonds; therefore, they expect even higher rates of return. Thus, regardless of whether private companies raise capital through debt or equity, their costs will be higher than public financing. Another key credit-related risk of PPPs is the possibility that the cost of credit will increase—or that credit will dry up entirely—midway through a project. A private entity’s inability to obtain capital, or to obtain capital at the cost anticipated when the PPP was originally devised, can jeopardize the entity’s ability to carry out the project—leaving the government responsible either for bailing out the private entity or taking over the project midstream. Such a situation occurred with the construction of Taiwan’s high-speed rail line. (See page 21.) Lopsided Allocation of Risk

#### The private sector has been reluctant to get involved in the past

Ybarra, Senior Transportation Analyst at the Reason Foundation, 08 (Shirley Ybarra, former Secretary of Transportation for the Commonwealth of Virginia, 7/28/08, <http://reason.org/news/printer/public-private-partnerships-in-1>, “Public Private Partnerships in Transportation”, DS)

Presidents G.W Bush and William Clinton issued executive orders (Executive Orders 12803 and 12893, respectively) to encourage private sector involvement in infrastructure investment. However, little private sector involvement was forthcoming. The states had {PAGE }statutes on their books that were aligned with the traditional funding and procurement mechanisms. These statutes would have to be addressed on a state by state basis. In addition, there were long standing practices embedded in the federal and state bureaucracies as well as in the contracting community.

**PPPs spark a loss in control with large end delays**

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Loss of Control **A PPP arrangement involves a swapping of risk for control**. In a traffic-based concession agreement (in which the private partner uses the revenue from high-speed rail service to pay for the cost of building the line), the government theoretically sheds a great deal of risk, but also provides the private company with a greater deal of control over how a high-speed rail line is operated. This is because p**rivate entities are less willing to depend on revenues from ticket sales and other user fees to recoup their investment unless they feel protected against government actions that might curtail those revenues.** Availability payment concessions (design-build-maintain) on the other hand continue to expose government to ridership risk, but also give the government greater control over how the high-speed rail line will operate. **The public faces dangers that a PPP may create a publicly subsidized piece of infrastructure that is primarily used to serve the profit-maximizing purposes of a private entity in ways that conflict with the public interest**. The most obvious example of this tension arises in the setting of ticket prices. A private concession operator will tend to want higher-priced tickets as a way to maximize their revenue for shareholders, even if higher ticket prices depress total ridership and therefore diminish the positive public impact of the route. The concessionaire for construction of England’s High Speed 1 line was forced to charge abovemarket access fees to recoup its investment. The British government later took over the company, a move intended to expand the use of the line. A similar example occurred in the development of Great Britain’s first highspeed rail line, High Speed 1, which was built by London & Continental Railways (LCR) under a concession agreement with the British government.31 In an effort to maximize revenue and pay back its debts, LCR assessed track access charges to companies providing rail service on the line that were higher than commercial rates and were thought to be high enough to make it unprofitable for would-be competitors to offer service on the line.32 Had the situation continued, the public interest imperatives of maximizing the use of the infrastructure would have run headlong into LCR’s financial imperative to maximize revenue. As it turned out, **the British government**—which had already agreed to guarantee LCR’s debt—took formal control of the company in 2009 and e**ntered into a new PPP for operation of the line.**33 By taking full ownership over LCR, the British government made it possible to offer lower track access charges and gain greater use of the high-speed rail line, though at the cost of absorbing much of the risk it thought it had offloaded to LCR in the first place. **Delays at Front End of Project PPPs often promise to complete construction faster than publicly built projects**—in part because penalties for late delivery included in PPP contracts drive improved performance by contractors. **The difference in speed, however, often depends on when one starts the clock. PPP projects are often more difficult to get off the ground than publicly built projects,** especially if they are conducted with due diligence and proper input from stakeholders. Th**e first hurdle in building a project using PPPs is to design one that is attractive to private investors while also satisfying public interest objectives.** This can be difficult. The Perpignan-Figueres high-speed rail line connecting France and Spain—often considered a successful PPP—is one example. Preparation of the concession agreement began in 2000, with publication of the request for bids in July 2001. One year later, in July 2002, the binational agency responsible for building the line chose a preferred bidder, only to walk away from negotiations in early 2003, citing “unacceptable” conditions demanded by the private sector bidders.34 The collapse of negotiations forced the contract to be opened for bid once again. The final contract was issued in early 2004 and financial close on the deal was not accomplished until February 2005.35 **The ability of the bi-national agency to hold firm during the first set of negotiations helped protect the public against an inadequate deal, but it also resulted in a significant delay in the start of the project.**

#### Private-Public Partnerships lock cities into bad deals

Cohen, former co-founder and president of the Center on Policy Initiatives, 2012 (Donald, “Fool Us Twice? The Peril of Rahm Emanuel's Public Private Partnerships”, Huffington Post, <http://www.huffingtonpost.com/donald-cohen/peril-of-public-private-partnerships_b_1442572.html>, AM)

The city council is balking because Chicago knows from experience how partnerships can sour. Former Mayor Richard Daley's sale of the city's parking meters is now widely recognized as a poorly negotiated partnership that locked the city into a bad deal (for the city, not the investor partners) for 75 years. And now the ink is dry and Chicagoans have to live with it -- a deal's a deal. Dozens of websites and tons of business literature warn about the perils of partnerships. They all say: pay attention to the details now or pay the price later in litigation over ambiguities, poorly drafted language or the unanticipated and unpredictable future; make sure you really trust your new partner shares your interests and vision; and above all don't rush into it until you are absolutely certain.

#### Public Private Partnerships spiral beyond control; no democratic control, expensive and reduce employment

Lucas, Public Employees Federation DOT Executive Board Member, 2011 (Edward, May 16, 2011, Why Public Private Partnerships Are

A Bad Deal for New Yorkers, <http://www.pef175.org/communications/PPP%20Senate%20Testimony%20%205-16%20final.pdf> , AJ)

It is tempting to believe that a public private partnership would produce massive new funds for infrastructure construction. But that is a false promise. There is no such thing as free money. In the end someone has to pay. And, when there are private investors or corporations this also means there is also the need for a monetary return on their investment. You can use nice words to describe it, but the fact remains, the source of revenue for transportation projects will always be the same- either taxes or tolls. Today’s buzzword is partnership. The term evokes warm and fuzzy feelings about cooperation and a sense that it is a smart way to save tax dollars while providing a profit for the private sector. A win-win situation. But the reality is very different. History shows us that time after time, public-private toll road projects mean higher cost to all of the taxpaying public, but especially to those who rely on the roads for their livelihoods. I would like to address today three dangers of PPPs. The potential to default, non-compete clauses and, finally, high costs. Although not all of these were transportation projects, a global study of PPPs done by the analyst Dexter Whitfield showed that some 1,000 PPPs, valued at a half a trillion (with a “T”) dollars, failed or were radically reduced in the decades since PPPs first became popular in the 1970s and 1980s. Whitfield writes – and I quote – “there is now a significant evidence base to show that most PPP projects have little or no democratic control or transparency, are costly, (provide) poor value, lack innovation and flexibility, reduce employment and erode public service values. “ Whitfield reports that there were 58 PPP failures in Europe, North America and Australia in recent years, the majority occurring between 2000 and 2008 with more than a third of which were transportation projects, according to his book, the “The Global Auction of Public Assets.” “There have been further PPP failures since I completed the book in late 2009,” Whitfield told our researchers at PEF.

### Resource Wars Defense – 2NC

#### ( ) No resource wars on the horizon – the thesis is inaccurate

Victor ‘7

David Victor is Director of the Laboratory on International Law and Regulation (ILAR) at UC-San Diego. Looking across a wide array of issues from environment and energy to human rights, trade and security, the Laboratory explores when (and why) international laws actually work. National Interest –Nov-Dec 2007 – http://nationalinterest.org/article/what-resource-wars-1851

RISING ENERGY prices and mounting concerns about environmental depletion have animated fears that the world may be headed for a spate of "resource wars"-hot conflicts triggered by a struggle to grab valuable resources. Such fears come in many stripes, but the threat industry has sounded the alarm bells especially loudly in three areas. First is the rise of China, which is poorly endowed with many of the resources it needs-such as oil, gas, timber and most minerals-and has already "gone out" to the world with the goal of securing what it wants. Violent conflicts may follow as the country shunts others aside. A second potential path down the road to resource wars starts with all the money now flowing into poorly governed but resource-rich countries. Money can fund civil wars and other hostilities, even leaking into the hands of terrorists. And third is global climate change, which could multiply stresses on natural resources and trigger water wars, catalyze the spread of disease or bring about mass migrations. Most of this is bunk, and nearly all of it has focused on the wrong lessons for policy. Classic resource wars are good material for Hollywood screenwriters. They rarely occur in the real world. To be sure, resource money can magnify and prolong some conflicts, but the root causes of those hostilities usually lie elsewhere. Fixing them requires focusing on the underlying institutions that govern how resources are used and largely determine whether stress explodes into violence. When conflicts do arise, the weak link isn't a dearth in resources but a dearth in governance.

### Cyber Terror Defense – 2NC

#### No risk of cyberwar

Knake ’10 (Robert K. Knake, an internationally-recognized expert on security, including homeland security, national security, cyber security, and counterterrorism. He is currently an on-air consultant for ABC News and teaches at Harvard's Kennedy School of Government. Clarke served the last three Presidents as a senior White House Advisor. Over the course of an unprecedented 11 consecutive years of White House service, he held the titles of: - Special Assistant to the President for Global Affairs - National Coordinator for Security and Counterterrorism - Special Advisor to the President for Cyber Security Prior to his White House years, Clarke served for 19 years in the Pentagon, the Intelligence Community, and State Department. During the Reagan Administration, he was Deputy Assistant Secretary of State for Intelligence. During the Bush (41) Administration, he was Assistant Secretary of State for Political-Military Affairs and coordinated diplomatic efforts to support the 1990–1991 Gulf War and the subsequent security arrangements. As a Partner in Good Harbor Consulting, LLC, Clarke advises clients on a range of issues including: - Corporate security risk management - Information security technology - Dealing with the Federal Government on security and IT issues - Counterterrorism In a Special Report by Foreign Policy Magazine, Clarke was chosen as one of The Top 100 Global Thinkers of 2010, Council on Foreign Relations, Former international affairs fellow in residence, “Cyberterrorism Hype v. Fact”, <http://www.cfr.org/terrorism-and-technology/cyberterrorism-hype-v-fact/p21434>, February 16, 2010, LEQ)

For now, the United States has little to fear from al-Qaeda on the cyberfront. Only a handful of sophisticated nation states currently have the ability to carry out a devastating cyberstrike. In his assessment of the People's Liberation Army Modernization program, Blair briefly noted that "China's aggressive cyberactivities" pose challenges, and it's true that China, Russia, and other countries' capabilities do pose a real threat. Luckily, these countries also have vulnerable systems, as well has a lot to lose, in any conflict, cyber or otherwise. The United States' reliance on the Internet and dependence on automated systems connected to it represent a massive vulnerability to the United States, but it is not one that terrorist organizations are likely to be able to exploit anytime soon. As with any developing technology, the cost and other barriers to developing an advanced cyberoffensive are declining each year.

#### Their evidence is just hype

Rahman ’10 (Arifeen Rahman, SEA National Security Intern, Scientist and Engineers for America, “Bringing Cybersecurity Back to Reality”, <http://www.sefora.org/2010/08/11/rahman_0811/>, August 11, 2010, LEQ)

The controversy over “cyber-rhetoric” is often reduced to a debate over the devastating magnitude of such possible scenarios versus the risks of framing them in such language. However, the truths in both positions do not inherently contradict each other, and can be reconciled. The great equalizer of these theories, therefore, lies in an analysis of predictions. The extent to which we can, or arguably should, take pre-emptive action to prevent cyber-attacks has its foundations in the determining the probability of these events. Recent trends in the cyber security discussion have forgone an assessment of probability for a “possibilistic” worst case assessment. Most studies tend to sensationalize the threats which cyberspace presents, forecasting imminent scenarios of destruction. Not only have these predictions been categorically proven false over the last ten years, but have also brought into question the reliability of these assessments overall. Black Swan theory, coined by Nassim Nicholas Taleb, explains how major catastrophes are low probability, high impact scenarios which were impossible to predict, but seem inevitable when looked at retrospectively. Viewing cyber security through this lens allows for a separation of policy from threat inflation. Black Swan theory proves that obsession over specific scenarios of cyber attack remain futile. The scenario which is never considered, which is most unexpected, will occur. Therefore, the only logical way to maintain cyber security is to preserve defensive protection of critical infrastructure, and avoid hyping up new threats. […] Cyber security will remain a critical issue for the current and all following administrations. In order to create a safe and secure environment, critical vulnerabilities must be addressed without creating an atmosphere of fear and paranoia. The “cyber-Armageddon” is not coming. It’s time for the federal government to get its head out its science fiction novel, and get back to reality.

#### No incentive

Knake ’10 (Robert K. Knake, an internationally-recognized expert on security, including homeland security, national security, cyber security, and counterterrorism. He is currently an on-air consultant for ABC News and teaches at Harvard's Kennedy School of Government. Clarke served the last three Presidents as a senior White House Advisor. Over the course of an unprecedented 11 consecutive years of White House service, he held the titles of: - Special Assistant to the President for Global Affairs - National Coordinator for Security and Counterterrorism - Special Advisor to the President for Cyber Security Prior to his White House years, Clarke served for 19 years in the Pentagon, the Intelligence Community, and State Department. During the Reagan Administration, he was Deputy Assistant Secretary of State for Intelligence. During the Bush (41) Administration, he was Assistant Secretary of State for Political-Military Affairs and coordinated diplomatic efforts to support the 1990–1991 Gulf War and the subsequent security arrangements. As a Partner in Good Harbor Consulting, LLC, Clarke advises clients on a range of issues including: - Corporate security risk management - Information security technology - Dealing with the Federal Government on security and IT issues - Counterterrorism In a Special Report by Foreign Policy Magazine, Clarke was chosen as one of The Top 100 Global Thinkers of 2010, Council on Foreign Relations, Former international affairs fellow in residence, “Cyberterrorism Hype v. Fact”, <http://www.cfr.org/terrorism-and-technology/cyberterrorism-hype-v-fact/p21434>, February 16, 2010, LEQ)

Beyond the technical hurdles, al-Qaeda's primary goal has always been to generate large numbers of casualties in addition to inflicting economic damage. But cyberattacks are largely weapons of mass disruption, not destruction. Causing a blackout or destroying airline reservations systems won't kill many people, if any at all. The worst-case scenario is that a cyberattack could override controls at a chemical or nuclear plant and cause a chemical release or nuclear meltdown. Such an incident could kill thousands if not millions. Thankfully, the control systems for plants that could cause that kind of harm are still "air gapped," disconnected from networks that connect to the Internet. In attempting to attack the homeland, the organization has relied on decidedly low-tech means. Of the twenty-two plots disrupted since 9/11, all involved the use of improvised explosives or small arms, and all were aimed at killing large numbers of people. In its twenty-year existence, al-Qaeda has never carried out a plot intended to do economic harm without also causing large numbers of casualties.

### Space Colonization Addon Defense – 2NC

#### Technology is nowhere near ready

Clark 2k (Greg, Staff Reporter – Space.com, “Will Nuclear Power Put Humans on Mars?”, Space.com, 5-21,

<http://www.space.com/scienceastronomy/solarsystem/nuclearmars_000521.html>)

When it comes to attracting interest in new mission plans to far-out places in the solar system, it is often the wildly futuristic concepts that get the attention. Antimatter propulsion, solar and magnetic sails all make great stories, but such futuristic concepts don't do anything to get humans out to the moon, or Mars, or to various local comets or asteroids within the foreseeable future. With these futuristic technologies barely out of their conceptual phases, practical use of such far-out concepts for human space transportation is decades away at best.

#### Humans can’t survive in space

Kruerger 8 (Curtis, “Dangers of Space”, St. Petersburg Times, 2-18, Lexis)

An undisclosed medical problem forced German astronaut Hans Schlegel to miss his first planned space walk last week. But Schlegel was lucky. He recovered in time for Wednesday's excursion outside the space station to help swap out a cooling system. It could be a much different picture for astronauts who travel to Mars, a treacherous 30-million-mile journey that NASA has begun to plan. The trip there would take half a year. Along the way, astronaut's bones would shrink 1.5 percent each month, making them more fragile. Their bodies would be exposed to radiation that could damage their DNA or cause cancer. Their hearts would weaken from the months of pumping blood inside a weightless body. Space travel could tear down their minds, as well as their bodies. Imagine stepping outside the space shuttle, staring back at Earth. Unlike Apollo astronauts who stood on the moon, Earth would not look like a giant, swirling-blue globe. It would look like one of the stars. "I think going to Mars and looking back to Earth and seeing Earth as a bluish star, that's got to have some impact on you, as to how remote you are," said Don Thomas, a former NASA astronaut who traveled to space four times. All these dangers show the challenges of NASA's plan for the future, which is to develop a spacecraft that would take Americans back to the moon as soon as 2018, and eventually on to Mars.

#### Energy requirements block colonization

Stross 7 (Charlie, Author Specializing in Technically Accurate Sci-Fi, “The High Frontier, Redux”, 6-16,

http://www.antipope.org/charlie/blog-static/2007/06/the\_high\_frontier\_redux.html)

To put this figure in perspective, the total conversion of one kilogram of mass into energy yields 9 x 1016 Joules. (Which one of my sources informs me, is about equivalent to 21.6 megatons in thermonuclear explosive yield). So we require the equivalent energy output to 400 megatons of nuclear armageddon in order to move a capsule of about the gross weight of a fully loaded Volvo V70 automobile to Proxima Centauri in less than a human lifetime. That's the same as the yield of the entire US Minuteman III ICBM force. For a less explosive reference point, our entire planetary economy runs on roughly 4 terawatts of electricity (4 x 1012 watts). So it would take our total planetary electricity production for a period of half a million seconds — roughly 5 days — to supply the necessary va-va-voom. But to bring this back to earth with a bump, let me just remind you that this probe is so implausibly efficient that it's veering back into "magic wand" territory. I've tap-danced past a 100% efficient power transmission system capable of operating across interstellar distances with pinpoint precision and no conversion losses, and that allows the spacecraft on the receiving end to convert power directly into momentum. This is not exactly like any power transmission system that anyone's built to this date, and I'm not sure I can see where it's coming from.

### SPS Addon Defense – 2NC

#### SPS alone can’t cover the world’s energy needs – won’t create a complete shift

Mankins, 2007, October 12, 2007 (John C., former manager of NASA’s Advanced Concepts Studies Office of Space Flight,, 10-12-07, “Leading Scientists and Thinkers on Energy,” from an interview with Mankins conducted by David Houle, an analyst who advises companies on new developing technology, http://www.evolutionshift.com/blog/2007/10/12/leading-scientists-and-thinkers-on-energy-–-john-c-mankins/ )

Mankins: Solar power satellites will be very, very large. Of course, all solar power systems are enormous. On the ground, it’s hard to see because the solar arrays are spread across thousands of rooftops. However, the overall systems is still of tremendous size. In the case of solar power satellites, if each satellite were to provide about 4,000 megawatts of power, then five of them would be needed to provide about 20 GW – which is approximately 2 percent of the U.S. demand for electricity. World demand for energy is currently about 4-times U.S. demand, but is growing fast! By 2100, huge new sources of renewable energy will be critical to our civilization, including hydroelectric (already in place), wind, ground solar, appropriate nuclear power—and space solar power. Evolutionshift.com: It sounds to me as though SSP is the one form of alternative energy that can supply a significant percentage of the energy needs of the planet. So it sounds like the vision needs to be forged into a multi-national will and then receive the necessary funding. Is that correct? If so, care to comment on the probability of this starting up in the next 2-3 years? Mankins: Actually, even if space solar power were fully developed, the global economy should have more than just one option: a prudent scenario would also involve a portfolio of current energy options—and a “quiver” full of new energy technologies ready to be deployed if, or when they are needed. Certainly, however, space solar is one of very few options to provide a substantial fraction of the truly vast amount of renewable energy that is needed to support human civilization.

#### SPS doesn’t exist and wont for forty years- your studies are bad, and ignored by the aerospace sector and the military.

Day, 8 (Dwayne A., 6/9/20008, Writer for the Space Review, Member of the Space Studies Board of the National Research Council/National Academy of Sciences, Doctorate in political science from The George Washington University, Knights in shining armor, accessed online, <http://thespacereview.com/article/1147/1>)

With all of this attention, one would suspect that there has been a fundamental technological breakthrough that now makes SSP possible, or a major private or government initiative to begin at least preliminary work on a demonstration project. But there has been none of this. In fact, from a technological standpoint, we are not much closer to space solar power today than we were when NASA conducted a big study of it in the 1970s. The reason that SSP has gained nearly religious fervor in the activist community can be attributed to two things, neither having to do with technical viability. The first reason is increased public and media attention on environmentalism and energy coupled with the high price of gasoline. When even Reese’s Peanut Butter Cups are advertised with a global warming message, it’s clear that the issue has reached the saturation point and everybody wants to link their pet project to the global warming discussion. SSP, its advocates point out, is “green” energy, with no emissions—other than the hundreds, or probably thousands, of rocket launches needed to build solar power satellites. The second reason is [a 2007 study produced by the National Security Space Office (NSSO) on SSP](http://www.acq.osd.mil/nsso/solar/SBSPInterimAssesment0.1.pdf). The space activist community has determined that the Department of Defense is the knight in shining armor that will deliver them to their shining castles in the sky. Space activists, who are motivated by the desire to personally live and work in space, do not care about SSP per se. Although all of them are impacted by high gasoline prices, many of them do not believe that global climate change is occurring; or if they do believe it, they doubt that humans contribute to it. Instead, they have latched on to SSP because it is expedient. Environmental and energy issues provide the general backdrop to their new enthusiasm, and the NSSO study serves as their focal point. Many people now claim that “the Department of Defense is interested in space solar power.”But it is not true. The NSSO study is remarkably sensible and even-handed and states that we are nowhere near developing practical SSP and that it is not a viable solution for even the military’s limited requirements. It states that the technology to implement space solar power does not currently exist… and is unlikely to exist for the next forty years. Substantial technology development must occur before it is even feasible. Furthermore, the report makes clear that the key technology requirement is cheap access to space, which no longer seems as achievable as it did three decades ago (perhaps why SSP advocates tend to skip this part of the discussion and hope others solve it for them). The activists have ignored the message and fallen in love with the messenger. But in this case, the activists touting the NSSO study do not understand where the NSSO fits into the larger military space bureaucracy. The [National Security Space Office](http://www.acq.osd.mil/nsso/) was created in 2004 and “facilitates the integration and coordination of defense, intelligence, civil, and commercial space activities.” But any office that “facilitates” the activities of other organizations has limited influence, especially when those other organizations are much bigger and have their own interests and connections to the senior leadership. The NSSO has a minimal staff and budget and does not command any assets—it does not fly any satellites, launch any rockets, or procure any hardware, all of which are measures of power within the military space realm. Simply put, the NSSO exists essentially as a policy shop that is readily ignored by the major military space actors such as Strategic Command, Air Force Space Command, and the National Reconnaissance Office whenever it suits them. As one former NSSO staffer explained, the office consists of many smart, hardworking people who have no discernible influence on military space at all. In fact, for several years there have been persistent rumors that the NSSO was about to be abolished as unnecessary, irrelevant, and toothless. Add to this the way in which the NSSO’s solar power satellite study was pursued—the study itself had no budget. In Washington, studies cost money. If the Department of Defense wants advice on, say, options for space launch, they hire an organization to conduct the study such as the RAND Corporation, or they employ one of their existing advisory groups such as the Air Force Scientific Advisory Board. All of this requires money to pay for the experts to perform the work. Even if the study is performed by a committee of volunteers, there are still travel, printing, staff support, overhead, and other expenses. Costs can vary widely, but at a minimum will start in the many tens of thousands of dollars and could run to a few million dollars. In contrast, the NSSO study of space solar power had no actual funding and relied entirely upon voluntary input and labor. This reflects the seriousness by which the study was viewed by the Pentagon leadership

#### SPS Fails- launch costs, efficiency problems, terrestrial competition, and maintenance costs

Fetter 04—PhD in energy and resources from UC Berkley and professor at the University of Maryland

(Fetter, Steve “Space Solar Power: An Idea Whose Time Will Never Come?”, [http://drum.lib.umd.edu/bitstream/1903/3992/1/2004-P&S-SSP.pdf](http://drum.lib.umd.edu/bitstream/1903/3992/1/2004-P%26S-SSP.pdf) , FS)

In summary, SSP could compete with earth-based solar power only if all of the following conditions are met: • solar supplies ~100% of total electricity demand; • the cost of space-based solar arrays is reduced to $1000 kWp–1 and earth-based arrays do not cost less than space-based arrays; • SSP transmission is no less efficient and no more expensive than storage or intercontinental transmission of electricity generated by earth-based systems; • SSP operation and maintenance is no more expensive than operations and maintenance of earth-based systems; • total on-orbit system mass is less than 5 kg kW–1; and • launch cost (currently about $10,000 kg–1 to low-earth orbit) is less than $350 kg–1. Much of the discussion surrounding SSP has focused on the last of these conditions. With chemical propellants, very low launch costs can be achieved only with a reusable vehicle. At today’s prices, propellant for a reusable vehicle would cost about $50 per kilogram placed into low-earth orbit (LEO) and 150 kg–1 for geosynchronous orbit (GEO).9 Achieving a total cost of $350 kg–1 would therefore require a total-to-fuel cost ratio of 7:1 for LEO and 2:1 for GEO. To put this into perspective, the cost ratio for the U.S. air freight industry is about 4:1. The probability the SSP could simultaneously meet all of the conditions outlined above and produce electricity more cheaply than solar arrays on earth is so small that any significant expenditure of federal funds for research and development on this concept would be unwise and unwarranted.