# High-Speed Rail Affirmative

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### 1AC – Plan

#### The United States federal government should invest in a national high-speed rail system.

### 1AC – Inherency

#### Contention One: Inherency

#### Obama’s high speed rail project is stymied. Political opposition and concerns about cost are impeding progress.

**The Washington Post**, **1/13**/2012 (Plans for high-speed rail are slowing down, p. http://www.washingtonpost.com/business/economy/plans-for-high-speed-rail-are-slowing-down/2012/01/13/gIQAngYc1P\_print.html)

Since then, things have only gotten worse. Spiraling cost estimates and eroding political and public support now threaten a project crucial to a 21st-century vision of train travel that President Obama promised would transform U.S. transportation much as interstate highways did more than a half-century ago. A national high-speed rail network would not only support tens of thousands of construction and manufacturing jobs, but it would get Americans out of their cars, revitalize struggling downtowns, and spare the environment millions of tons of carbon emissions and travelers untold hours wasted in traffic or in airport terminals waiting out delays. Obama set a goal of providing 80 percent of Americans access to high-speed rail within 25 years. But that lofty vision is yielding to the political gravity generated by high costs, determined opponents and a public that has grown dubious of government’s ability to do big things. **Virtually none of the projects has gotten off the ground**, and the one that has is in trouble. For Obama, the political stakes are high going into the 2012 election. Republican front-runner Mitt Romney has accused him of putting too much faith in government to build the economy. The president, Romney says to the delight of Republican partisans, “does not know” how business, or the economy, works. The plan that envisions bullet trains trains zipping between the nation’s major cities at speeds up to 220 miles per hour, was one of the few transformative projects included in the $797 billion stimulus program enacted early in Obama’s presidency. “Imagine whisking through towns at speeds over 100 miles an hour, walking only a few steps to public transportation, and ending up just blocks from your destination,” Obama said in announcing his vision for high-speed rail in April 2009. “Imagine what a great project that would be to rebuild America.” So far, Obama has wagered more than $10 billion in federal money on high-speed rail, only to see his plans diminished, one after another. Republican governors in Florida, Wisconsin and Ohio turned back billions of dollars in federal money for high-speed rail, denouncing the proposals as both the creation of Big Government and as economically unfeasible. The objections in those three states left money to be redirected to a host of projects that promise to relieve bottlenecks and speed up traditional rail service in many parts of the country. In one case, the 285-mile trip between Chicago and Detroit will be reduced 30 minutes from the current 51 / 2 hours. But those improvements fall short of the transformative promise of high-speed rail.

#### Current funding for high speed rail is insufficient. A significant investment is needed for progress.

**Rogers**, Spring **2011** (Joshua – J.D. University of Illinois College of Law, The Great Train Robbery: How Statutory Construction May Have Derailed an American High Speed Rail System, University of Illinois Journal of Law, Technology & Policy, p. Lexis)

President Obama has noted that the $ 8 billion ARRA grant is intended as a down payment on high speed rail. n100 This initial investment is to be followed [\*227] by $ 1 billion annually to continue funding of planning and projects. n101 Standing alone, these figures are vast; however, when compared with the $ 1.8 trillion the federal government has spent on air and highway travel since 1960, the figures are minimal. n102 In fact, when projected over an equal period of time, they are nearly identical to the **3%** of federal funding for intercity passenger travel that passenger rail has traditionally received. n103 This minimal funding demonstrates a traditional dilemma faced by passenger rail: **it does not receive the funding required to make it successful**. If a high speed rail system is meant to compete with air and automobile travel, it will cost significantly more than the amounts allocated by ARRA and the President's proposed continued investment.

### 1AC – Climate

#### Contention Two: Global Warming

#### Transportation emissions will increase by nearly 2% a year --- they are a primary contributor to global warming. Current green technologies will fail to curb the trend without a high speed rail system.

**Christensen**, 1/3/**2012** (Angela, The Need for Speed: How High Speed Rail Challenges the ‘Green’ Car, p. <http://begreen.botw.org/2012/01/high-speed-rail-challenges-green-car/>)

In today’s busy world, people are always on the move. Whether it is by car, plane, bus, subway or train, we cannot hold still; however, the continuous movement of people has taken its toll on the planet. **Transport is one of the main contributors to CO2 emissions and global warming**. Given the demand for travel, airports are overcrowded and roadways are congested. To make matters worse, transport energy emissions are expected to increase 1.7% per year from 2004-2030. In response to the tremendous amounts of carbon that cars emit into the air every second and the increased concern over environmental degradation, car manufacturers integrated ‘green’ technology into their production lines and unveiled alternative energy vehicles to the world in the way of the hybrid and electric vehicles. However, these ‘green’ cars are not affordable to most Americans, especially given the current state of the national economy. The initial cost to own a hybrid car is between $2,000 and $10,000 more than their traditional car competitors. Additionally, the complex technology onboard hybrid vehicles makes repairs more cumbersome and often leaves the buyer with a large out-of-pocket expense if something goes awry. Nevertheless, hybrid cars cut carbon emissions by 25-30% over the most fuel-efficient vehicles, making them seem more environmentally attractive. Hybrids perform best during low speed city driving or in traffic jams when the battery kicks in to power the car rather than the engine running on fuel. If highway driving is your normal route, then the hybrid’s motor continuously runs on gasoline making the trip to the gas station inevitable. Unfortunately, less fuel consumption and fewer carbon emissions are met with environmental toxins that are produced during the car’s manufacture. Hybrid cars are manufactured using metals for both their batteries and their electric drive motors and wiring. Although the nickel-hydride battery is less dangerous than its contemporary counterpart, the lead battery, the nickel must still be mined and is usually done so in open cast mines that can lead to great environmental devastation. Furthermore, the copper used for the car’s wiring and motor must also be excavated from the earth–not exactly a green situation. So what about an electric car? You may think that by purchasing an electric car instead of a hybrid car you are circumnavigating all of these apparent hybrid negativities–but don’t rush out and buy one too fast. Plugging in your car will certainly eliminate the trip to the gas pump but it may be putting further stresses on the environment depending on where you live. If the electricity used to recharge the electric car’s battery comes from a renewable source like wind or solar, then the environmental impact that the car’s battery has on the environment is low. In contrast, if the electricity is generated from a coal-fired power station, then the battery’s affect on the environment is much worse. Although ‘green’ car technology seems to be better for the environment in most cases when compared against the traditional car, we must not overlook the sustainability of public transportation–something extremely underutilized in the United States. The transport sector faces many challenges in the future such as urbanization, the scarcity of natural resources and increases in oil and fuel prices. High Speed Rail (HSR) is a viable option to combating these negative externalities while creating a sustainable means of mobility. In other parts of the world, HSR is not a new concept. It has been utilized in Japan since the 1960s, and today, much of Europe is connected by HSR. **HSR** not only provides a quick way to move around but also **emits far less carbon** into the atmosphere **than any other form of public transport**. HSR can reach speeds of up to 223 mph, truly revolutionizing how humans move. The reduced carbon emissions from HSR are also worth taking note of. Covering a distance of 704 km (439 miles), CO2 emissions in grams per passenger per kilometre are 2.7 g/pkm using HSR, compared with 153 g/pkm for air travel and 115.7 g/pkm by car. Not only does HSR have fewer carbon emissions, carry more passengers and move a heck of a lot faster than a car, it is comfortable to travel in and allows commuters to work or relax. They provide a great deal of personal space and are equipped with modern technologies such as Internet and power outlets, and the use of mobile devices is allowed. There are restaurant cars serving food and beverages and passengers can walk around freely…or sleep. Accommodating the movement of people from here to there around the globe puts strains on ecosystems and natural resources. Although ‘green’ car technology has helped to alleviate some of the pressures put on the natural environment by manufacturing cars that emit less CO2 and use less fuel, we must look to more efficient forms of public transport to transform how we travel. HSR can carry more people more quickly while emitting far less CO2 into the atmosphere than cars or planes. Investing our dollars into a sustainable mode of transportation like HSR minimizes environmental impacts, limits emissions and waste, offers a choice for a mode of transport, is affordable and efficient, and promotes equity within and between successive generations. We can look to the future with great hope that HSR will be integrated into this country sooner rather than later.

#### Studies show that HSR will save six billion pounds of CO2 emissions a year

**C**enter for **C**lean **A**ir **P**olicy/**C**enter for **N**eighborhood **T**echnology, January **2006** (High Speed Rail and Greenhouse Gas Emissions in the U.S., p. 1)

High speed rail is often cited as a solution to many transportation problems: It can reduce congestion on roads and at airports, is cost effective and convenient, improves mobility and has environmental benefits. While greenhouse gas (GHG) emissions are **likely to be reduced** as travelers switch to high speed rail from other modes of travel, little modeling has been done to estimate this potential impact in the U.S. Those estimates that have been made simply assume a percentage of trips nationally will be diverted to rail from other modes. The Center for Neighborhood Technology (CNT) and the Center for Clean Air Policy (CCAP) have, alternatively, estimated on a corridor-by-corridor basis the annual GHG benefits of high speed rail systems in the U.S. using current plans for high speed rail development in the federally designated high speed rail corridors. To estimate high speed rail’s net emissions impact, we calculated the carbon dioxide (CO2) emissions saved from passengers switching to high speed rail from other modes (air, conventional rail, automobile and bus) and subtracted the estimated emissions generated by high speed rail. Our calculations were based on passenger projections and diversion rates for each corridor and typical emissions rates for each mode of travel, including several different high speed rail technologies. Current projections show that passengers would take 112 million trips on high speed rail in the U.S. in 2025, traveling more than 25 billion passenger miles. This would result in 29 million fewer automobile trips and nearly 500,000 fewer flights. We calculated a total emissions savings of **6 billion pounds of CO2 per year** (2.7 MMTCO2) if all proposed high speed rail systems studied for this project are built. Savings from cancelled automobile and airplane trips are the primary sources of the emissions savings; together these two modes make up 80 percent of the estimated emissions savings from all modes. Our modeling shows that high speed rail, if built as planned, will **generate substantial GHG savings** in all regions. The total emissions savings vary greatly by corridor, however, as do the source of those savings. In some regions, such as the Midwest, the impact on air travel is likely to be modest; our analysis shows just a 7 percent decrease in flights from today’s levels. In California, on the other hand, 19 million passengers are projected to switch from air—a volume that would result in 114 percent of today’s 192 million annual direct flights in the corridor being cancelled. Such ridership levels may be an overestimate, or may be possible if projected growth in air travel and indirect flights, including those from outside the corridor are included. To draw so many air passengers to rail will certainly require that high speed rail ticket prices be competitive with air and that service be as convenient and time-efficient. It is worth further study to see if such high levels of mode shifting are likely. In some respects, the California system, as it is currently planned, represents what will be the second generation of high speed rail in many of the other corridors. While areas like the Pacific Northwest may increase ridership sooner with an incremental approach to high speed rail that uses existing rail routes, the success of a new high speed rail system like California’s could prove the value of faster trains with higher upfront capital costs.

#### Unchecked global warming causes extinction.

Tickell 8 (Oliver, Climate Researcher, The Guardian, “On a Planet 4C Hotter, All We Can Prepare for is Extinction”, 8-11, http://www.guardian.co.uk/commentisfree/2008/aug/11/climatechange)

We need to get prepared for four degrees of global warming, Bob Watson told the Guardian last week. At first sight this looks like wise counsel from the climate science adviser to Defra. But the idea that we could adapt to a 4C rise is absurd and dangerous. Global warming on this scale would be a catastrophe that would mean, in the immortal words that Chief Seattle probably never spoke, "the end of living and the beginning of survival" for humankind. Or perhaps the beginning of our extinction. The collapse of the polar ice caps would become inevitable, bringing long-term sea level rises of 70-80 metres. All the world's coastal plains would be lost, complete with ports, cities, transport and industrial infrastructure, and much of the world's most productive farmland. The world's geography would be transformed much as it was at the end of the last ice age, when sea levels rose by about 120 metres to create the Channel, the North Sea and Cardigan Bay out of dry land. Weather would become extreme and unpredictable, with more frequent and severe droughts, floods and hurricanes. The Earth's carrying capacity would be hugely reduced. Billions would undoubtedly die. Watson's call was supported by the government's former chief scientific adviser, Sir David King, who warned that "if we get to a four-degree rise it is quite possible that we would begin to see a runaway increase". This is a remarkable understatement. The climate system is already experiencing significant feedbacks, notably the summer melting of the Arctic sea ice. The more the ice melts, the more sunshine is absorbed by the sea, and the more the Arctic warms. And as the Arctic warms, the release of billions of tonnes of methane – a greenhouse gas 70 times stronger than carbon dioxide over 20 years – captured under melting permafrost is already under way. To see how far this process could go, look 55.5m years to the Palaeocene-Eocene Thermal Maximum, when a global temperature increase of 6C coincided with the release of about 5,000 gigatonnes of carbon into the atmosphere, both as CO2 and as methane from bogs and seabed sediments. Lush subtropical forests grew in polar regions, and sea levels rose to 100m higher than today. It appears that an initial warming pulse triggered other warming processes. Many scientists warn that this historical event may be analogous to the present: the warming caused by human emissions could propel us towards a similar hothouse Earth.

#### The threshold for probability is one percent

**Strom 2007** (Robert – professor emeritus of planetary science at the University of Arizona, Hot House: Global Climate Change and the Human Condition, p. 246)

Keep in mind that the current consequences of global warming discussed in previous chapters are the result of a global average temperature increase of only 0.5 'C above the 1951-1980 average, and these consequences are beginning to accelerate. Think about what is in store for us when the average global temperature is 1 °C higher than today. That is already in the pipeline, and there is nothing we can do to prevent it. We can only plan strategies for dealing with the expected consequences, and reduce our greenhouse gas emissions by about 60% as soon as possible to ensure that we don't experience even higher temperatures. There is also the danger of eventually triggering an **abrupt climate change** that would accelerate global warming to a catastrophic level **in a short period of time**. If that were to happen we would not stand a chance. Even if that possibility had **only a 1% chance of occurring**, the consequences are so dire that it would be **insane not to act**. Clearly we cannot afford to delay taking action by waiting for additional research to more clearly define what awaits us. The time for action is now.

#### Even if global warming has a long timeframe, err affirmative. There is a psychological bias against long-term threats

**Psychology Today**, 12/28/**2007** (10 Ways We Get the Odds Wrong, p. http://www.psychologytoday.com/print/24035)

**We underestimate threats that creep up on us**. Humans are ill-prepared to deal with risks that don't produce **immediate negative consequences, like** eating a cupcake or **smoking cigarettes**. As a result, we are **less frightened** of heart disease **than we should be**. Heart disease is the end result of actions that one at a time (one cigarette or one french fry) aren't especially dangerous. But repeated over the years, those actions have deadly consequences. "Things that build up slowly are **very hard for us to see**," says Kimberly Thompson, a professor of risk analysis at the Harvard School of Public Health. Obesity and **global warming are in that category**. "**We focus on the short-term even if we know the long-term risk**."

### 1AC – Oil Dependency

#### Contention Three: Oil Dependency

#### All other rival powers are developing high-speed rail. Investment in HSR preserves American competitiveness and insulates the economy from oil shocks.

**Kunz**, 3/10/**2011** (Andy – president and CEO of the U.S. High Speed Rail Association, U.S. High-Speed Rail: Time to Hop Aboard or Be Left Behind, Environment 360, p. <http://e360.yale.edu/feature/us_high-speed_rail_time_to_hop_aboard_or_be_left_behind/2378/>)

China has committed to investing $360 billion to vastly expand its showcase network of high-speed trains, which already carry passengers at more than 200 miles per hour between some of the country’s largest cities. Spain, despite its economic woes, is investing $170 billion to extend its acclaimed high-speed rail system, which now makes the 386-mile Madrid-Barcelona run in just 2 hours, 38 minutes — compared to six hours by car. A similar boom in high-speed rail construction is taking place throughout Europe, from the boot of Italy to the Baltic Sea. Worldwide, nations not normally associated with the bullet train revolution — India, Brazil, Argentina, and Morocco, among others — are making plans to build high-speed rail networks. They understand that rapid, inter-city rail systems will be essential to developing competitive 21st-century economies as oil supplies dwindle, highways and airports face increasing congestion, and pressure to reduce carbon emissions rises. And the United States? For the past several months the news on the high-speed rail front has been dominated by several governors, swept into power by the Tea Party movement, proudly proclaiming that they will have **nothing to do with high-speed rail projects**, which they contend are boondoggles. Indeed, the governors of Florida, Wisconsin, and Ohio have collectively rejected $3.6 billion in federal funds that would have covered nearly all of the cost of building rail lines on such routes as Orlando to Tampa, Milwaukee to Madison, and Cleveland to Columbus. Fortunately, the foresight of the Obama administration and various states will ensure that the foundation of a national high-speed rail network will be laid in the coming years, with $8 billion in federal stimulus funds going to construct the first links in a high-speed rail network that is envisioned to stretch 17,000 miles by 2030. Bullet trains would eventually whisk people between all major U.S. cities — Los Angeles to Seattle, Dallas to Albuquerque, and Boston to Washington, at 220 miles per hour. The cost of such a network would be significant — $600 billion — but a combination of public and private funds would build the system, which would eventually yield benefits that far exceed the original investment. For now, the U.S. funds rejected by governors Rick Scott of Florida, Scott Walker of Wisconsin, and John Kasich of Ohio, will be distributed to other states such as California and Illinois, which will benefit for years to come from the job creation and economic stimulus that will accompany the establishment of high-speed rail networks. In the future, the actions by these three governors will be viewed as folly, decisions that were made on ideological rather than rational grounds and that undermine the job creation that the three governors tout as central to their administrations. The decisions of the three Republican governors were not isolated acts, but rather a coordinated effort by the Tea Party and its allies to attempt to kill high-speed rail across America. Fortunately, 35 other governors — Republicans and Democrats alike — whose states were eligible for federal high-speed rail funding did accept U.S. grants for rail projects. Last month’s decision by Governor Scott of Florida to reject federal funding for high-speed rail reflects the combination of bad information and partisan thinking that motivated all three governors to turn their backs on the future. In making his decision, Scott says he relied heavily on a January report by the libertarian Reason Foundation, which is funded by major conservative organizations, oil companies, and companies involved in highway construction. The Reason Foundation report was riddled with inaccuracies, exaggerations, and distortions, such as a claim that the construction of the Orlando-Tampa line could cost Florida taxpayers $3 billion in capital cost overruns. That figure was arrived at by comparing the project in Florida to California, which faces far tougher right-of-way and land-use issues. The Tampa-Orlando line already has a long-established right of way on the Interstate 4 median, making it much cheaper to build. In addition, the eight international rail consortia seeking to construct the Florida line have guaranteed that they will cover operation, maintenance, and subsidy costs for 30 years. After rejecting the federal funds, Scott’s office issued a statement that he “is now focused on moving forward with infrastructure projects that create long-term jobs and turn Florida’s economy around.” Those new projects will require far more Florida tax dollars than would ever have been spent on the Tampa to Orlando line, prompting former Republican Governor Jeb Bush to express surprise at Scott’s decision. Fifteen Republican and 11 Democratic state senators in Florida also signed a letter to U.S.Transportation Secretary Ray LaHood asking him to ignore Scott and allow the legislature to work with the consortia to revive the Tampa to Orlando project. In addition, a group of Florida mayors is speaking with LaHood about bypassing the governor and allowing an organization formed by the mayors to receive the federal funds and oversee the building of the Tampa-Orlando line. This effort underscores the broad, bipartisan backing for the project, as evidenced by the fact that eight business associations from 11 counties in central Florida are staunch supporters of the proposed rail line. One key reason: The line would connect Tampa and Orlando with Walt Disney World, one of the world’s top tourist attractions. The reasons that so many disparate interests support the creation of a national high-speed rail network are glaringly obvious, and are becoming more so by the day. The United States has become far too dependent on foreign oil, with Americans consuming six times more oil per capita than Europeans, who enjoy better, faster, and cheaper mobility. The U.S now spends up to $700 billion a year to import foreign oil, 70 percent of which is consumed by cars, trucks, and airplanes. Now, for the second time in less than three years, the price of oil has shot up past $100 a barrel, threatening the fragile economic recovery. And most experts agree that the world has passed the point of peak oil, which means that as **demand soars and supplies dwindle**, oil prices could hit $300 per barrel this decade. Enhancing U.S. energy security is just one reason the country needs a state-of-the-art high-speed rail system, which by 2030 could transport millions of people each day between America’s cities. A national high-speed rail system would **generate millions of jobs; help revive the country’s manufacturing sector** by creating a new industry producing the trains, steel, and related components; alleviate pressure on a crumbling transportation infrastructure; and lessen the ever-worsening congestion on America’s highways and at its airports, where delays cause an estimated $156 billion in losses to the U.S. economy annually. And then there is climate change and the **large-scale reduction of CO2 emissions** that would result from the creation of an interstate high-speed rail system and the expansion of regional commuter rail systems. As a high-speed rail network spreads across the U.S. in the coming decades, the costs of operating the national transportation system will decline each year to the point where the savings will eventually exceed the estimated $600 billion cost of building the rail system. Although public funds will be used to cover much of the construction costs, the network will perform best if operated by private companies. The U.S. must build a national high-speed rail network if it hopes to **maintain its competitiveness in the world economy**. China and Europe are now moving ahead with their high-speed rail networks at breakneck speed, which means that in a decade or two they will have **significantly reduced their dependence on imported oil, created tens of millions of new jobs, and saved** their countries **trillions** of dollars by vastly improving the productivity of their economies thanks to a low-carbon transportation sector that moves people and goods at speeds that could one day hit 300 miles per hour, or more. The U.S. can be part of that future. But if more states follow the example of Florida, Wisconsin, and Ohio, the country will remain shackled by 19th- and 20th-century forms of transportation in a 21st-century world. Contemplate this image: China, Europe, Russia, South America, and other parts of the globe are streaking by at 250 miles per hour while the likes of Governor Scott are stuck in a traffic jam on an interstate, watching the trains whiz past.

#### HSR is the only option to reduce oil dependency. Failure to shift away from oil results in economic collapse and resource wars

**Perl**, 11/19/**2011** (Anthony – professor of Urban Studies and Political Science at Simon Fraser University, How Green is High-Speed Rail, CNN, p. http://www.cnn.com/2011/11/18/world/how-green-is-hsr/index.html)

Any debate about the future of high-speed rail must consider where this mobility option fits into the 'big picture' of how transportation systems meet looming economic, energy and environmental challenges. In a world where 95% of motorized mobility is currently fueled by oil, high-speed rail offers a proven means of reducing dependence on this increasingly problematic energy source. This value of using proven electric propulsion technology should not be underestimated when both the time and money to deploy energy alternatives are in short supply. In our recent book Transport Revolutions, Richard Gilbert and I documented the economic, environmental and political dividends to be gained from replacing the internal combustion engines powering today's aircraft, cars, and motor vehicles with traction motors that can be powered by multiple energy sources delivered through the electric grid. Since electricity is an energy carrier, it can be generated from a mix of sources that incorporate the growing share of geothermal, hydro, solar, and wind energy that will be produced in the years ahead. And because electric motors are three to four times more efficient than internal combustion engines, an immediate improvement will precede introducing renewable energy into transportation. Grid-connected traction offers the **only realistic option** for significantly reducing oil use in transportation over the next 10 years. If such a shift does not begin during this decade, the risk of a **global economic collapse** and/or **geo-political conflict** over the world's remaining oil reserves would become dangerously elevated. Making a significant dent in transportation's oil addiction within 10 years is **sooner than fuel cells, biofuels, battery-electric vehicles and other alternative energy technologies will be ready** to deliver change. Biofuels that could power aircraft now cost hundreds of dollars per gallon to produce. Batteries that a big enough charge to power vehicles between cities are still too big and expensive to make electric cars and buses affordable. But grid-connected electric trains have been operating at scale and across continents for over a century. And when the Japanese introduced modern high-speed trains through their Shinkansen, in 1964, the utility of electric trains was greatly extended. Since the 1980s, countries across Asia and Europe have been building new high-speed rail infrastructure to deploy electric mobility between major cities up to 1,000 kilometers apart. For intercity trips between 200 and 1,000 kilometers, high-speed trains have proven their success in drawing passengers out of both cars and planes, as well as meeting new travel demand with a much lower carbon footprint than driving or flying could have done. If we are serious about reducing oil's considerable risks to global prosperity and sustainability, we will not miss the opportunity offered by high-speed rail to decrease transportation's oil consumption sooner, rather than later.

#### Failure to shift from an oil-dependent transportation sector results in extinction --- economic collapse escalates to nuclear war

**Bearden**, 6/12/**2000** (Thomas – Association of Distinguished American Scientists and LTC, U.S. Army (Retired), Why The Energy Crisis Needlessly Exists and How to Solve It, p. [www.cheniere.org/techpapers/Unnecessary%20Energy%20Crisis.doc](http://www.cheniere.org/techpapers/Unnecessary%20Energy%20Crisis.doc))

History bears out that **desperate nations take desperate actions**. Prior to the final economic collapse, the stress on nations will have increased the intensity and numberof their conflicts, to the point where the arsenals of weapons of mass destruction (WMD) now possessed by some 25 nations, are almost certain to be released. As an example, suppose a starving North Korea [7] launches nuclear weapons upon Japan and South Korea, including U.S. forces there, in a spasmodic suicidal response. Or suppose a desperate China--whose long-range nuclear missiles (some) can reach the United States--attacks Taiwan. In addition to immediate responses, the mutual treaties involved in such scenarios will quickly draw other nations into the conflict, escalating it significantly. Strategic nuclear studies have shown for decades that, under such extreme stress conditions, once a few nukes are launched, adversaries and potential adversaries are then **compelled to launch on perception** of preparations by one's adversary. The real legacy of the MAD concept is this side of the MAD coin that is almost never discussed. Without effective defense, the only chance a nation has to survive at all is to launch immediate full-bore pre-emptive strikes and try to take out its perceived foes as rapidly and massively as possible. As the studies showed, **rapid escalation to full WMD exchange occurs**. Today, a great percent of the WMD arsenals that will be unleashed, are already on site within the United States itself [8]. The resulting great Armageddon will **destroy civilization** as we know it, and perhaps most of the biosphere, at least for many decades. My personal estimate is that, beginning about 2007, on our present energy course we will have reached an 80% probability of this "final destruction of civilization itself" scenario occurring at any time, with the probability slowly increasing as time passes. One may argue about the timing, slide the dates a year or two, etc., but the basic premise and general time frame holds. We face not only a world economic crisis, but also a world destruction crisis. So unless we dramatically and quickly solve the energy crisis — rapidly replacing a substantial part of the "electrical power derived from oil" by "electrical power freely derived from the vacuum" — we are going to incur the final "Great Armageddon" the nations of the world have been fearing for so long. I personally regard this as the greatest strategic threat of all times — to the United States, the Western World, all the rest of the nations of the world, and civilization itself { } { }. What Is Required to Solve the Problem To avoid the impending collapse of the world economy and/or the destruction of civilization and the biosphere, we must quickly replace much of the "electrical energy from oil" heart of the crisis at great speed, and simultaneously replace a significant part of the "transportation using oil products" factor also.

#### Independently, competitiveness on global warming preserves American primacy. Failure to maintain our edge results in resource conflicts and great power wars.

**Klarevas**, 12/15/**2009** (Louis - professor in the Center for Global Affairs at New York University, Securing American primacy while tackling climate change, The Huffington Post, p. http://www.huffingtonpost.com/louis-klarevas/securing-american-primacy\_b\_393223.html)

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

#### Collapse of leadership causes global nuclear war

**Kagan 2011** (Robert, Senior Associate – Carnegie Endowment for International Peace, “The Price of Power”, The Weekly Standard, 1-24, http://www.weeklystandard.com/articles/price-power\_533695.html?nopager=1)

Today the international situation is also one of high risk.  • The terrorists who would like to kill Americans on U.S. soil constantly search for safe havens from which to plan and carry out their attacks. American military actions in Afghanistan, Pakistan, Iraq, Yemen, and elsewhere make it harder for them to strike and are a large part of the reason why for almost a decade there has been no repetition of September 11. To the degree that we limit our ability to deny them safe haven, we increase the chances they will succeed. • American forces deployed in East Asia and the Western Pacific have for decades prevented the outbreak of major war, provided stability, and kept open international trading routes, making possible an unprecedented era of growth and prosperity for Asians and Americans alike. Now the United States faces a new challenge and potential threat from a rising China which seeks eventually to push the U.S. military’s area of operations back to Hawaii and exercise hegemony over the world’s most rapidly growing economies. Meanwhile, a nuclear-armed North Korea threatens war with South Korea and fires ballistic missiles over Japan that will someday be capable of reaching the west coast of the United States. Democratic nations in the region, worried that the United States may be losing influence, turn to Washington for reassurance that the U.S. security guarantee remains firm. If the United States cannot provide that assurance because it is cutting back its military capabilities, they will have to choose between accepting Chinese dominance and striking out on their own, possibly by building nuclear weapons. • In the Middle East, Iran seeks to build its own nuclear arsenal, supports armed radical Islamic groups in Lebanon and Palestine, and has linked up with anti-American dictatorships in the Western Hemisphere. The prospects of new instability in the region grow every day as a decrepit regime in Egypt clings to power, crushes all moderate opposition, and drives the Muslim Brotherhood into the streets. A nuclear-armed Pakistan seems to be ever on the brink of collapse into anarchy and radicalism. Turkey, once an ally, now seems bent on an increasingly anti-American Islamist course. The prospect of war between Hezbollah and Israel grows, and with it the possibility of war between Israel and Syria and possibly Iran. There, too, nations in the region increasingly look to Washington for reassurance, and if they decide the United States cannot be relied upon they will have to decide whether to succumb to Iranian influence or build their own nuclear weapons to resist it. In the 1990s, after the Soviet Union had collapsed and the biggest problem in the world seemed to be ethnic conflict in the Balkans, it was at least plausible to talk about cutting back on American military capabilities. In the present, increasingly dangerous international environment, in which terrorism and great power rivalry vie as the greatest threat to American security and interests, cutting military capacities is simply reckless. Would we increase the risk of strategic failure in an already risky world, despite the near irrelevance of the defense budget to American fiscal health, just so we could tell American voters that their military had suffered its “fair share” of the pain? The nature of the risk becomes plain when one considers the nature of the cuts that would have to be made to have even a marginal effect on the U.S. fiscal crisis. Many are under the illusion, for instance, that if the United States simply withdrew from Iraq and Afghanistan and didn’t intervene anywhere else for a while, this would have a significant impact on future deficits. But, in fact, projections of future massive deficits already assume the winding down of these interventions.Withdrawal from the two wars would scarcely make a dent in the fiscal crisis. Nor can meaningful reductions be achieved by cutting back on waste at the Pentagon—which Secretary of Defense Gates has already begun to do and which has also been factored into deficit projections. If the United States withdrew from Iran and Afghanistan tomorrow, cut all the waste Gates can find, and even eliminated a few weapons programs—all this together would still not produce a 10 percent decrease in overall defense spending.  In fact, the only way to get significant savings from the defense budget—and by “significant,” we are still talking about a tiny fraction of the cuts needed to bring down future deficits—is to cut force structure: fewer troops on the ground; fewer airplanes in the skies; fewer ships in the water; fewer soldiers, pilots, and sailors to feed and clothe and provide benefits for. To cut the size of the force, however, requires reducing or eliminating the missions those forces have been performing. Of course, there are any number of think tank experts who insist U.S. forces can be cut by a quarter or third or even by half and still perform those missions. But this is snake oil. Over the past two decades, the force has already been cut by a third. Yet no administration has reduced the missions that the larger force structures of the past were designed to meet. To fulfill existing security commitments, to remain the “world’s power balancer of choice,” as Leslie Gelb puts it, to act as “the only regional balancer against China in Asia, Russia in eastern Europe, and Iran in the Middle East” requires at least the current force structure, and almost certainly more than current force levels. Those who recommend doing the same with less are only proposing a policy of insufficiency, where the United States makes commitments it cannot meet except at high risk of failure. The only way to find substantial savings in the defense budget, therefore, is to change American strategy fundamentally. The Simpson-Bowles commission suggests as much, by calling for a reexamination of America’s “21st century role,” although it doesn’t begin to define what that new role might be.  Others have. For decades “realist” analysts have called for a strategy of “offshore balancing.” Instead of the United States providing security in East Asia and the Persian Gulf, it would withdraw its forces from Japan, South Korea, and the Middle East and let the nations in those regions balance one another. If the balance broke down and war erupted, the United States would then intervene militarily until balance was restored. In the Middle East and Persian Gulf, for instance, Christopher Layne has long proposed “passing the mantle of regional stabilizer” to a consortium of “Russia, China, Iran, and India.” In East Asia offshore balancing would mean letting China, Japan, South Korea, Australia, and others manage their own problems, without U.S. involvement—again, until the balance broke down and war erupted, at which point the United States would provide assistance to restore the balance and then, if necessary, intervene with its own forces to restore peace and stability.  Before examining whether this would be a wise strategy, it is important to understand that this really is the only genuine alternative to the one the United States has pursued for the past 65 years. To their credit, Layne and others who support the concept of offshore balancing have eschewed halfway measures and airy assurances that we can do more with less, which are likely recipes for disaster. They recognize that either the United States is actively involved in providing security and stability in regions beyond the Western Hemisphere, which means maintaining a robust presence in those regions, or it is not. Layne and others are frank in calling for an end to the global security strategy developed in the aftermath of World War II, perpetuated through the Cold War, and continued by four successive post-Cold War administrations. At the same time, it is not surprising that none of those administrations embraced offshore balancing as a strategy. The idea of relying on Russia, China, and Iran to jointly “stabilize” the Middle East and Persian Gulf will not strike many as an attractive proposition. Nor is U.S. withdrawal from East Asia and the Pacific likely to have a stabilizing effect on that region. The prospects of a war on the Korean Peninsula would increase. Japan and other nations in the region would face the choice of succumbing to Chinese hegemony or taking unilateral steps for self-defense, which in Japan’s case would mean the rapid creation of a formidable nuclear arsenal. Layne and other offshore balancing enthusiasts, like John Mearsheimer, point to two notable occasions when the United States allegedly practiced this strategy. One was the Iran-Iraq war, where the United States supported Iraq for years against Iran in the hope that the two would balance and weaken each other. The other was American policy in the 1920s and 1930s, when the United States allowed the great European powers to balance one another, occasionally providing economic aid, or military aid, as in the Lend-Lease program of assistance to Great Britain once war broke out. Whether this was really American strategy in that era is open for debate—most would argue the United States in this era was trying to stay out of war not as part of a considered strategic judgment but as an end in itself. Even if the United States had been pursuing offshore balancing in the first decades of the 20th century, however, would we really call that strategy a success? The United States wound up intervening with millions of troops, first in Europe, and then in Asia and Europe simultaneously, in the two most dreadful wars in human history.  It was with the memory of those two wars in mind, and in the belief that American strategy in those interwar years had been mistaken, that American statesmen during and after World War II determined on the new global strategy that the United States has pursued ever since. Under Franklin Roosevelt, and then under the leadership of Harry Truman and Dean Acheson, American leaders determined that the safest course was to build “situations of strength” (Acheson’s phrase) in strategic locations around the world, to build a “preponderance of power,” and to create an international system with American power at its center. They left substantial numbers of troops in East Asia and in Europe and built a globe-girdling system of naval and air bases to enable the rapid projection of force to strategically important parts of the world. They did not do this on a lark or out of a yearning for global dominion. They simply rejected the offshore balancing strategy, and they did so because they believed it had led to great, destructive wars in the past and would likely do so again. They believed their new global strategy was more likely to deter major war and therefore be less destructive and less expensive in the long run. Subsequent administrations, from both parties and with often differing perspectives on the proper course in many areas of foreign policy, have all agreed on this core strategic approach.  From the beginning this strategy was assailed as too ambitious and too expensive. At the dawn of the Cold War, Walter Lippmann railed against Truman’s containment strategy as suffering from an unsustainable gap between ends and means that would bankrupt the United States and exhaust its power. Decades later, in the waning years of the Cold War, Paul Kennedy warned of “imperial overstretch,” arguing that American decline was inevitable “if the trends in national indebtedness, low productivity increases, [etc.]” were allowed to continue at the same time as “massive American commitments of men, money and materials are made in different parts of the globe.” Today, we are once again being told that this global strategy needs to give way to a more restrained and modest approach, even though the indebtedness crisis that we face in coming years is not caused by the present, largely successful global strategy. Of course it is precisely the success of that strategy that is taken for granted. The enormous benefits that this strategy has provided, including the financial benefits, somehow never appear on the ledger. They should. We might begin by asking about the global security order that the United States has sustained since Word War II—the prevention of major war, the support of an open trading system, and promotion of the liberal principles of free markets and free government. How much is that order worth? What would be the cost of its collapse or transformation into another type of order? Whatever the nature of the current economic difficulties, the past six decades have seen a greater increase in global prosperity than any time in human history. Hundreds of millions have been lifted out of poverty. Once-backward nations have become economic dynamos. And the American economy, though suffering ups and downs throughout this period, has on the whole benefited immensely from this international order. One price of this success has been maintaining a sufficient military capacity to provide the essential security underpinnings of this order. But has the price not been worth it? In the first half of the 20th century, the United States found itself engaged in two world wars. In the second half, this global American strategy helped produce a peaceful end to the great-power struggle of the Cold War and then 20 more years of great-power peace. Looked at coldly, simply in terms of dollars and cents, the benefits of that strategy far outweigh the costs.  The danger, as always, is that we don’t even realize the benefits our strategic choices have provided. Many assume that the world has simply become more peaceful, that great-power conflict has become impossible, that nations have learned that military force has little utility, that economic power is what counts. This belief in progress and the perfectibility of humankind and the institutions of international order is always alluring to Americans and Europeans and other children of the Enlightenment. It was the prevalent belief in the decade before World War I, in the first years after World War II, and in those heady days after the Cold War when people spoke of the “end of history.” It is always tempting to believe that the international order the United States built and sustained with its power can exist in the absence of that power, or at least with much less of it. This is the hidden assumption of those who call for a change in American strategy: that the United States can stop playing its role and yet all the benefits that came from that role will keep pouring in. This is a great if recurring illusion, the idea that you can pull a leg out from under a table and the table will not fall over.

### 1AC – Solvency

#### Contention Four: Solvency

#### A strong signal of federal commitment to HSR is critical to generate investment and confidence in the industry. A federal HSR plan can generate independent revenue to pay for the cost

**Todorovich, Schned and Lane 2011** (Petra – director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 46-47)

Like other modes of transportation and public goods, high-speed rail generally does not pay for itself through ticket fares and other operating revenues. Reliable federal funding is needed for some portion of the upfront capital costs of constructing rail infrastructure, but operating revenues frequently cover operating and maintenance costs. Two well-known examples of highly successful high-speed rail lines—the Tokyo– Osaka Shinkansen and Paris–Lyon TGV—generate an operating proﬁt (JR Central 2010; Gow 2008). German high-speed trains also have been proﬁtable on an operating basis, with revenues covering 100 percent of maintenance costs and 30 percent of new track construction (University of Pennsylvania 2011). Moreover, as long as the HSIPR Program combines funding for both high-speed and conventional rail, federal grants, not loans, will be required to support its initiatives. Since conventional rail services are likely to need continued operating subsidies, it is even more important to secure a federal funding source for capital infrastructure costs. A small but reliable transportation tax for high-speed and conventional passenger rail would demonstrate the federal government’s commitment to a comprehensive rail program, giving states the assurance they need to plan high-speed rail projects and equipment manufacturers the conﬁdence they require to invest in the industry. The challenge of securing revenue for rail investments is closely linked to the chal-lenge of funding the nation’s entire surface transportation program. While in the past revenues from the federal motor fuel taxes were sufﬁcient to cover the nation’s highway and transit priorities, the 18.4 cents per gallon gasoline tax has been ﬁxed since 1993, while the dollar has lost one-third of its purchasing power in that time (RAND Corporation 2011). New sources of sustainable revenue are needed to support not only high-speed and conventional passenger rail but also all of the nation’s surface transportation obligations, including highways and transit. In recent years, Congress has addressed the funding shortfall with short-term ﬁxes by transferring general fund revenues to the highway trust fund. However, the need to ﬁnd a long-term solution presents the opportunity to address existing surface transportation needs and high-speed and passenger rail all at once. At some point in the near future, Congress must address the shortfall in national transportation funding. At that time legislators could also dedicate revenues for high-speed and passenger rail as part of the surface transportation program, generated by a variety of small increases or reallocations of current transportation-related fees to provide at least $5 billion in annual funds. Several proposals are currently being considered. • Raise the gas tax by 15 cents a gallon (The National Commission on Fiscal Responsibility and Reform, 2010) or more. Each additional cent of gas tax generates approximately $1.4 billion annually (AASHTO 2011). Several cents could be devoted to passenger rail. • Add a $1 surcharge on current passenger rail tickets to produce approximately $29 million annually (Amtrak 2011d). Though this is a relatively small amount of revenue, it could become an important source of funds for expanding and main-taining the system as passenger rail ridership grows. • Or, shift from a national gas tax to a percentage tax on crude oil and imported reﬁned petroleum products consumed in the United States to fund all the nation’s transportation needs (RAND Corporation 2011). RAND estimated that an oil tax of 17 percent would generate approximately $83 billion a year (at midsummer 2010 prices of $72 per barrel). Five billion dollars of this amount could be dedicated to passenger rail.

#### Long-term and predictable federal funding is necessary to encourage private investment

**Cotey**, June **2011** (Angela – associate editor of Progressive Railroading, California HSR Officials Contend with Criticism, Progressive Railroading, p. [http://www.progressiverailroading.com/high\_speed\_rail/article/California-HSR-officials-contend-with-criticism--26838#](http://www.progressiverailroading.com/high_speed_rail/article/California-HSR-officials-contend-with-criticism--26838))

But for CHSRA to achieve its larger vision, the authority will need tens of billions of dollars in additional funding — federal dollars included. The uncertainty surrounding the near- and **long-term prospects** for federal funding don’t affect CHSRA’s “day to day,” but it could impact the private sector’s willingness to pony up funds to help California build its sprawling system, says Barker. “It’s a little bit ironic because there are a lot of people, especially in Congress, saying they want private-sector participation, but private firms right now are seeing volatility and political strife, and that’s not an environment in which the private sector will want to participate,” he says. That’s why it’ll be critical for Congress to create a program to fund high-speed rail on an **ongoing basis**. And as long as the private sector is confident the federal government will pony up more funds for HSR development, there are plenty of firms interested in securing a stake in California’s project.

## Inherency Extensions

### Inherency – HSR Dead

#### Congress is blocking funding for HSR

**Schaper**, 5/13/**2012** (David, Lack of Support Puts the Brakes on High-Speed Rail, North Country Public Radio, p. http://www.northcountrypublicradio.org/news/npr/152587645/lack-of-support-puts-the-brakes-on-high-speed-rail)

Three years ago, President Obama was rolling out an ambitious vision for high-speed rail in America. "Imagine whisking through towns at speeds over 100 mph," the president said at the time. Today, there are a few Amtrak trains going that fast, but for the most part, the president's plans for high-speed trains have slowed considerably. On Amtrak's Wolverine service, which goes from Chicago to Ann Arbor, Mich., and then to Detroit and Pontiac, Mich., the train reaches speeds of up to 110 mph. It's the fastest of any U.S. train outside the Northeast Corridor. It is quite a feat, even though the train is only able to go that fast over about a 90-mile portion of the trip. "It's got to be viewed as only the beginning," says Joe Szabo, administrator of the Federal Railroad Administration. He says additional track and signal improvements are underway to help speed up trains throughout the Midwest. "So in the next two to two-and-a-half years, you're going to see almost 80 percent of Chicago-Detroit and almost 80 percent of Chicago-St. Louis at sustained speeds of 110 mph." That would reduce travel times on those routes to fewer than four hours, making the train faster than driving and competitive with flying, says Szabo. Both the Michigan and Illinois routes are benefiting because other states have been turning down funding for high-speed rail funds. Mixed Acceptance Republican governors in Wisconsin, Ohio and Florida sent back hundreds of millions of dollars in stimulus funding. They argued that few people would ride the trains, which would leave their states on the hook for millions in operating subsidies. So that makes Michigan's Republican Gov. Rick Snyder an outlier of sorts because he sees spending on high-speed rail as a wise investment. "Our folks in Michigan are looking for it," says Michigan transportation director Kirk Steudle. "They're interested, they want to ride it; the ridership numbers are going up and it proves that passenger transportation is a very viable option in Michigan for the corridor between Detroit and Chicago." Amtrak says it had a record number of riders nationwide last year. With gas prices still relatively high, the rail service is on track for another record year. But it's hardly smooth sailing for fast trains in this country. Scattered Focus "Increasing top speeds to 110 mph does not necessarily make a high-speed rail service," says Ken Orski, a former top U.S. Department of Transportation official who now publishes a transportation newsletter. He says what really counts is the average speed over an entire trip, and that's where Amtrak has trouble. Since most Amtrak trains run on freight railroad tracks, freight traffic backups often cause lengthy Amtrak delays. The poor condition of some stretches of leased track can slow passenger trains to just 20 to 25 mph until repairs can be made Orski says high-speed rail works best in densely populated corridors between cities only a few hundred miles apart, such as the Northeast corridor between Boston, New York, Philadelphia and Washington, D.C. "That is where the administration should have focused its efforts, rather than scatter $10 billion on some 140 projects in 32 states," Orski says. That $10 billion mostly came from the stimulus package three years ago, and a big chunk of it went to California, which is developing a 200-mph, high-speed rail service between Los Angeles and San Francisco. It's a project many experts say shows some promise, but its ballooning cost and planning problems lead some critics to call it the train to nowhere. Congress has now put on the brakes on funding for high-speed rail, but high-speed rail advocates say if Amtrak can at least get enough funding to keep making improvements, that might whet the appetite for greater rail spending.

#### Congress will reject HSR funding --- stranding current investments

**McClatchy**, **4/20**/2012 (Congress poised to reject high-speed rail funding, p. http://www.mcclatchydc.com/2012/04/20/146185/congress-poised-to-reject-high.html)

The Obama administration sought $1 billion for high-speed rail next year; **Congress is on track to provide zip**. In a bad sign -- but not a killing blow -- for California’s speedy rail ambitions, senators this week joined their U.S. House counterparts in dismissing the administration’s funding request. The bicameral blow-off means a fiscal 2013 transportation spending bill will omit the high-speed rail dollars President Barack Obama wanted. On its face, the omission of new high-speed support does not directly impede California’s program. The state already has received some $3.3 billion in federal funds to get the project started, and no additional funds were planned on for the new fiscal year that starts Oct. 1. “This is something we anticipated,” Dan Richard, chair of the California High-Speed Rail Authority, said in an interview Friday. “In our business plan, we do not expect any additional federal funds for at least three years.” Long-term, though, the omission underscores the complications California could face in coming years when federal funds are explicitly relied upon. The state’s latest high-speed rail business plan anticipates the federal government providing $42 billion of the total project cost, now pegged at $68.4 billion. “We continue to have the risk of either stranded investments, or the even bigger risk that California is forced to spend money it does not have to salvage something,” Elizabeth Goldstein Alexis, co-founder of the Palo Alto-based Californians Advocating Responsible Rail Design, said in an interview earlier this month.

#### HSR is a pipe dream

**Doyle**, 2/29/**2012** (Michael, Obama’s high-speed rail plans hit traffic in Congress, McClatchy Newspaper, p. <http://www.mcclatchydc.com/2012/02/29/140399/obamas-high-speed-rail-plans-hit.html>)

Congress and the Obama administration are headed for another head-on collision over high-speed rail. On Wednesday, Transportation Secretary Ray LaHood reiterated President Barack Obama's strong support even as a top Republican in the House of Representatives naysayed. Neither side appears ready to steer clear this election year, particularly in differences concerning California. "We're committed to this; there's no going back," LaHood said at a high-speed rail conference. "We need to keep the momentum going." But congressional Republicans, even some who've backed high-speed rail in the past, are resisting with equal vehemence. "If the president thinks his proposal is going to (fly) for high-speed rail, he's pipe-dreaming," Rep. John Mica, R-Fla., the chairman of the House Transportation and Infrastructure Committee, told the same rail conference.

### Inherency – HSR Dead – Election

#### HSR is dead --- GOP election momentum

**Mead**, 1/4/**2012** (Walter Russell, High Speed Rail Fail: US Edition, The American Interest, p. http://blogs.the-american-interest.com/wrm/2012/01/04/high-speed-rail-fail-us-edition/)

Via Meadia has covered the high speed rail fail in China; now this ‘technology of the future’ seems to be suffering a meltdown here in the US. Since the Obama presidency began, various proposals for high-speed rail have been popping up across the country—Florida, Wisconsin, and California have each considered plans to build the “transportation of the future.” But there is one thing excitable planners forgot to ask: does anybody want it? Florida and Wisconsin have already turned down federal funding for high-speed rail, citing high costs and low popularity. Now it appears that deep-blue California might do the same. From the Wall Street Journal: The California High-Speed Rail Peer Review Group—which the state legislature appointed to analyze funding for the rail system—questioned the California High-Speed Rail Authority’s plan to start construction without any assurance of future funding from the federal government, among other factors. Moving ahead “represents an immense financial risk” for California, the group said in its report, echoing concerns from critics who say the project could leave state taxpayers on the hook for billions of dollars in future costs. [. . .] The Field Poll, a research group primarily active in California, found in a December survey that 59% of Californians would reject the bond package if the vote were held again. Republicans have what looks at this early stage like a lock on the House in 2012 and seem likely to win the Senate. That means federal funding for more high speed rail is as dead as the dodo for some time to come; without vast federal help no state can rationally make a commitment to visionary and expensive rail projects.

### Inherency – AT: Future Congressional Funding

#### HSR is blocked by Congressional infighting and a lack of permanent funding

**U**nited **P**ress **I**nternational, **5/22**/2012 (High-speed rail still a dream in U.S., p. http://www.upi.com/Business\_News/Energy-Resources/2012/05/22/High-speed-rail-still-a-dream-in-US/UPI-19121337682600/)

High-speed systems are often idealized as the optimal form of passenger rail. Both supporters and non-supporters of so-called bullet trains say that high-speed rail may be the best but it's the pinnacle -- something worth working toward. That's because, done right, high-speed trains are fast, economical, and efficient and relieve congestion on roads and in airports, supporting a cleaner natural environment. By 2030, the United States will have access to about half as much oil as is available today, High Speed Rail Association Chief Executive Officer Andy Kunz said. This a big reason to think about alternative mass transit systems and certainly a part of why Obama has a vision that 80 percent of Americans should have access to high-speed rail within 25 years. That's a lofty goal given the tough economy, a Congress hindered by partisanship and the problems seen with projects just begun in places like California. But it's a nice vision. **The reality is weighed down by the practical**. Like the federal highway system, which took nearly 40 years to build, a designated long-term passenger rail program -- not just an intermittently funded high-speed rail program -- would likely have to be established to see an effective program put into place.

### Inherency – AT: American Recovery and Reinvestment Act of 2009

#### AARA only covered “shovel-ready” projects --- this caused multiple high speed rail projects to lose funding

**Rogers**, Spring **2011** (Joshua – J.D. University of Illinois College of Law, The Great Train Robbery: How Statutory Construction May Have Derailed an American High Speed Rail System, University of Illinois Journal of Law, Technology & Policy, p. Lexis)

As a law partially intending to provide an immediate boost to the U.S. economy, ARRA was designed to favor "ready-to-go" or "shovel-ready" projects. n126 This means that favored projects "are those for which planning, environmental and preliminary engineering activities have been completed - thus allowing grant recipients to immediately begin final design and [\*230] construction and/or enter into design-build contracts." n127 Combined with the July 10, 2009 deadline for pre-applications to the Federal Railroad Administration, this means that prospective projects would have to be "shovel-ready" **less than six months** after ARRA passed on Feb.17, 2009. n128 So, those projects that are best suited to ARRA funding are those that were "shovel-ready", or nearly so, prior to the passage of ARRA, as well as those projects that could become "shovel-ready" in less than six months. High speed rail in the U.S. was, for the most part, not "shovel-ready" prior to the passage of ARRA and is not able to become "shovel-ready" in less than six months. Prior to the passage of ARRA only two states, Florida and California, had high speed rail projects on the horizon. n129 In fact, Texas, which includes one of the U.S.'s heaviest traffic corridors, missed out on ARRA high speed rail funding because, it was so far from appearing to be "shovel-ready," it wasn't awarded any funds. n130 The absence was so shocking that it prompted U.S. Transportation Secretary Ray LaHood to say, "If Texas had had its act together, it would have gotten some high-speed rail money." n131 Additionally, the development of new rail lines is such a legal process, due to right-of-way issues and local and federal ordinances, that planning **cannot be expected to be completed in six months**. Therefore, a funding legislation intended to respond quickly to economic hardship, such as ARRA, is not the ideal way to fund the development of a U.S. high speed rail network.

#### AARA does not allocate enough money to jumpstart HSR

**Rogers**, Spring **2011** (Joshua – J.D. University of Illinois College of Law, The Great Train Robbery: How Statutory Construction May Have Derailed an American High Speed Rail System, University of Illinois Journal of Law, Technology & Policy, p. Lexis)

ARRA funding fails to establish the beginnings of a high speed rail network, because it is too modest. Considering the total funding of $ 400-$ 800 billion that U.S. high speed rail will require, the $ 8 billion allocated by ARRA would amount to only a 1%-2% down payment on a national network. Furthermore, if each of the eleven designated corridors was to receive an equal share in the ARRA funds, it would amount to $ 720 million per corridor, falling below 5% of total project cost for even the cheapest of the corridors. Thus, it would seem that the only way that the $ 8 billion could significantly "jump-start" development in any of the high speed rail corridors would be to allocate the full amount between one or two corridors. Moreover, too much of the intended funding is diverted to non-high speed rail improvements for the ARRA funds to "jump-start" high speed rail. According to the funding provisions of ARRA, the Secretary of Transportation is only required to "give priority to projects that support the development of intercity high speed rail service." n135 This weak language allows projects laying foundation for high speed rail to receive priority along with actual "shovel-ready" projects. n136 Through this language $ 4.5 billion of the awards that were granted under ARRA actually went to non-high speed projects, n137 while $ 3.5 billion of the awards were distributed between California and Florida high speed rail projects. n138 Thus, even though only two high speed rail projects were actually funded with ARRA allocations, the amounts of those awards were drastically diluted by non-high speed projects almost to the equivalent of an equal share allocation among all eleven corridors. Therefore, it appears significantly unlikely that ARRA provides sufficient funding to even begin a U.S. high speed rail network.

## Oil Dependency Extensions

### Green Leadership Impact – Primacy

#### Green leadership maintains primacy --- weak and piecemeal measures will cause a collapse

**Crawford** 2010/**2011** (Colin – J.D. Wake Forest University School of Law, Green Warfare: An American Grand Strategy for the 21st Century, Wake Forest Journal of Business and Intellectual Property Law, p. Lexis)

The United States is in desperate need of such farsighted leadership. This country is in the midst of an identity crisis, having struggled to define itself since the end of the Cold War. As the world's lone superpower, the United States has learned the hard way that along with its strong standing comes immense responsibility in terms of leading efforts to eliminate climate change, nonproliferation, and global poverty. n7 Recent developments in international affairs, sustained economic woes, and partisan gridlock have divided the nation's attention and resources. Lawmakers are currently playing whack-a-mole with America's priorities, n8 lacking both the vision and direction needed to combat the long-term challenges that await. However, all is not lost. Despite increasing (and oftentimes overblown) fears of "American decline," the United States remains the world's top dog in terms of economic and military power. n9 What these fears reflect, however, is the very real sentiment that the United States can no longer sustain itself as the head of a purely unipolar world. n10 Economies in emerging markets such as China, India, and Brazil have shaken off their lethargy and are growing in a manner which suggests a global realignment of wealth is beginning to take place, shifting from West to East and from North to South. n11 Because [\*245] this new wealth begets power, it is clear that the United States will face **increasing competition in the coming decades**. n12 This is a departure point in American history. Increasingly burdened by the prosecution of two wars, a historic financial crisis, and ever-mounting interest on the national debt, the United States faces deep and painful cuts in spending in order to restore its fiscal health. n13 Yet American politicians must take care not to sacrifice long-term programs in pursuit of short-term political gains. It is said that the most dangerous animal in the woods is the wounded one; as the U.S. begins to recapture its economic momentum, it will be poised to make radical changes in terms of aligning the nation's policy objectives. President Obama presented a vision of "Winning the Future" in his 2011 State of the Union address, offering a feel-good story that was ultimately short on detail and made vague calls for investment in high-speed rail and clean energy. n14 As the United States emerges from this economic crisis, it should not fall back on **piecemeal measures** and **disjointed policies**. This is a time for a fundamental realignment of American resources toward a defined and overarching national objective. n15 The crafting of a grand strategy for the United States will require radical thought and near-panoramic insight. This Comment seeks to offer a glimpse of what such a grand strategy could look like, drawing on the strengths of the American model to fundamentally reshape the way the U.S. produces, supports, and defends its way of life. In short, this Comment advocates an Apollo Program-type mentality in terms of "greening" American society from the top [\*246] down--beginning with the military--in order to break the country's addiction to fossil fuels. In embracing a broad-based "green" strategy, the United States can weave together a number of priorities heretofore thought irreconcilable: national security, environmental protection, and economic growth. In defining a clear "enemy" - our dependence on fossil fuels--the U.S. can unite various segments of society around a value-neutral and universally beneficial policy objective. By calling upon the resources of academia, the military, and the business community, the government can harness the institutions in which America has traditionally had the most palpable innovative advantages. n16 By becoming the international leader in green technology invention, production, and deployment, the United States can help ameliorate the effects of its last industrial revolution while **triggering a new one in the process**.

### Oil Dependency Impact – Primacy

#### Oil dependency hamstrings the U.S. military and foreign policy goals --- that escalates to great power conflict

**Crawford** 2010/**2011** (Colin – J.D. Wake Forest University School of Law, Green Warfare: An American Grand Strategy for the 21st Century, Wake Forest Journal of Business and Intellectual Property Law, p. Lexis)

[\*248] In addition to the potential for economic growth, even the most ardent climate change skeptics will concede that the United States' dependence on fossil fuels has implications for national security and foreign policy. Security analysts have made the case for framing this debate in terms of "natural security," as the scarcity of natural resources will inevitably affect the United States' foreign policy calculus for years to come. n24 Despite the fact that the U.S. imports most of its oil from Canada and Latin America n25 - not the Middle East - many emerging markets are just beginning their love affair with the sticky, black hydrocarbon. n26 The corresponding increase in demand from emerging economies will continue to drive up energy prices, necessitating importation of oil from countries with less friendly dispositions toward the United States. n27 It is important to note how energy policy intersects with virtually all other aspects of governance. Not only will increased prices constrain U.S. fiscal policy and make it more expensive to project American power around the globe, they create pressures that will heavily influence American foreign policy in the coming decades, whether through resource wars or climate-induced humanitarian crises. n28 International trade and maritime policy in particular will be [\*249] greatly affected. Because "90 percent of global commerce and two thirds of all petroleum supplies travel by sea," and global energy demand will continue its inexorable rise, the Indian Ocean - already heavily used by "nuclearized" powers such as Pakistan, India, China, and Israel - will dramatically increase in strategic importance to the world's great powers. n29 The proximity of nuclear states in the Asia-Pacific region, along with increased pressures commensurate with rising energy demand, are already heightening military tensions among the major players in the region, including China and Russia in particular. n30 Geopolitical constraints will become **increasingly difficult to manage** as fuel prices continue to rise, and intervention will be needed to combat piracy and protect merchant shipping. n31 Make no mistake, the United States' continued dependence on fossil fuels poses significant problems for the national interest. The strategic implications are clear as U.S. foreign policy throughout entire regions is framed in the context of energy. n32

### Peak Oil Impact – Economic Collapse

#### Failure to adjust for peak oil results in resource wars and economic collapse

**Way**, 8/18/**2008** (Ron – U.S. Department of Interior’s division of Fish, wildlife and Parks, and commissioner of the Minnesota Pollution control Agency, Waking Up to the Threat of ‘Peak Oil,’ Minnesota Post, p. http://www.minnpost.com/stories/2008/08/18/2981/waking\_up\_to\_the\_threat\_of\_peak\_oil)

The recent dip in the world oil market has given consumers relief from surging pump prices, and has investors and commentators waxing with hope that the dip will become a trend. But don't bet on it, says energy expert Matthew Simmons. Along with the likes of oilman T. Boone Pickens whose celebrated national campaign calls for a radical shift away from oil dependence, Simmons says that all fundamentals remain in place for energy prices to resume their skyward climb to levels quite beyond records of a month ago. In fact, in 2005 Simmons personally wagered $5,000 that the worldwide price per barrel would top $200 by 2010 (it was at a record $147 on July 11, and closed Friday at $113.77 on the New York Mercantile Exchange). Simmons fully expects to win the bet. He has a growing band of believers, including state Rep. Bill Hilty, DFL-Finlayson, who chairs the House Energy Policy and Finance Division and is openly concerned about the future picture of energy and its implications for Minnesota. "We have a global economy that's based on cheap oil," said Hilty, adding that sharply rising energy costs would be economically damaging and could, if not checked, become dangerous. A key witness at St. Paul hearing Simmons, of Houston, Texas, was a key witness at a St. Paul hearing last spring chaired by Hilty. Listening intently and nodding agreement in the packed hearing room were Eagan energy investor Jim Johnson and a retired IBM scientist, Norm Erickson of Rochester, Minn. Simmons explains that the supply-demand fundamentals that drive oil prices "have actually gotten worse": • Worldwide oil demand continues to grow rapidly in populated China and India, while economic growth in oil-rich Russia, Mexico and even Iran has those nations keeping more of their production to themselves. Economic growth means more oil-gulping industry and many more cars; later this year Tata Motors' will bring its low-cost "Nano" to market, and millions who now ride bikes or small scooters will be driving cars that require lots of oil to make and still more oil to move. • Despite a rash of media reports that Americans are driving less and in smaller cars, oil demand in the world's highest energy-consuming nation has dipped only slightly. The United States still consumes 21 million barrels of oil daily (with 5 percent of world population the U.S. consumes a quarter of world oil, while China, with 21 percent of the population, consumes just 8 percent). • Producing oil is increasingly difficult, time-consuming and costly — Canada, for example, has turned to extracting oil from "tar sands" with a complex heat process that burns so much natural gas that exports are curtailed, helping crimp supply that's driving gas prices in places like Minnesota much higher. World oil production of 85 million barrels a day is seen by some analysts as **unsustainable** (54 of the 65 major oil fields — including the North Sea and Mexico — already are in decline) economic projections would require daily production to increase to a staggering 130 million barrels by 2030. Warnings of a 'tipping point' It's the last point that most worries Simmons and Hilty, and a growing band of others. Simmons warns that the world is near a "tipping point" where demand could overwhelm supply, sending energy prices soaring and causing economic disruption if not collapse. In a volatile energy market, **massive overnight price spikes** could be triggered by threatening speeches by a Middle East leader or a catastrophic shipwreck in places like the narrow Strait of Hormuz at the mouth of the Persian Gulf, through which a third of the world's oil supply passes on vulnerable vessels longer that three football fields. Worse, Simmons says, a severe supply and demand imbalance could result in resource wars that a European group has warned may be closer than most would care to believe. More recently, a diverse group of luminaries — including Colin Powell, Henry Kissinger and James Woolsey — sent an open letter to President Bush and presidential candidates Sen. Barak Obama and Sen. John McCain warning that the United States "is facing a long-term energy crisis that could become one of the most significant economic and national security challenges of the 21st Century." Simmons, for 40 years an energy investment banker, is among adherents to the theory of "peak oil" — a point where oil production hits its maximum, after which supply goes into permanent decline. Little dispute that oil is finite There is disagreement on how much oil remains, owing to notoriously inaccurate data on reserves. But among energy experts there is little dispute that oil is a finite resource with all signs favoring the "peak oil" view: Oil supply is of lower quality, which requires more refining; there are more and more dry drill holes (Simmons said there have been 220 nonproducing holes in the Arctic, a place that the U.S. Geological Survey says is oil-rich) and oil will be much more costly to extract from things like oil shale or from much deeper wells, some of which are under lots of water. When Brazil giddily announced it had found an offshore oil field that could make the country the world's largest producer, analysts noted that the oil is 32,000 feet deep and technology to draw it out hasn't even been invented. According to a Bloomberg report, tapping the potential reserve will require equipment that can withstand 18,000 pounds per square inch of pressure (enough to crush a truck), pipes that can carry oil at temperatures above 500 degrees Fahrenheit, and drill bits that can penetrate layers of salt more than a mile thick. Also, the water is so deep that massive drilling platforms cannot be anchored (as in the Gulf of Mexico) but must float on a windy, swelling ocean and rely on complex positioning technology to maintain proximity to the drill hole. Compare that to the derrick that Edwin Drake erected to tap Pennsylvania crude in 1859 that was a mere 70 feet under solid ground. 'Easy stuff' is gone What it comes down to is that the "easy stuff" has already been pumped out, and much of what's left will be very expensive to produce. Vast oil shale deposits in Colorado, Utah and Wyoming, for prime example, would require the removal of millions of tons of rock and an energy-intensive extraction process (nearly 1,000 degrees of heat is needed to free the oil) so expensive that no one has yet figured out how to make it work. Hilty puts it this way: To extract Pennsylvania crude, it took only one unit of energy input for each 100 units of energy extracted, or 100 to 1; most oil fields today have an energy input/output ratio of about 30 to 1, and Canadian tar sands is down around 3 to 1. Once technology is developed to extract oil from the Brazilian reserve or oil shale, the energy ratio would be even less. By way of comparison, most analysts say the energy ratio of corn ethanol is about 1 to 1 (Simmons says it's less, so much so that "it simply doesn't make any sense"). Along with others, Simmons has been warning about peak oil for two decades, but he's not the first. M. King Hubbert, a geophysicist with Shell Oil, accurately predicted in 1956 that U.S. oil would peak by 1970. That's when the United States went from being a producing nation to being one that today imports 70 percent of the oil it consumes. Unlike climate change theorists, who rely on data and modeling, "peak oil" advocates rely on known production data that in every case shows a bell-curve history of discovery to increasing production to decreasing production to exhaustion. Taken together, the data from all oil production sites, along with such other information as the ratio of dry-hole to successful-hole drilling and economic growth rates, have helped geoscientists develop "peak" scenarios that are broadly accepted.

### Hegemony Impact – Global Violence

#### Primacy has resulted in the lowest level of war in history – best stats prove

**Owen 2011** (John – professor of politics at the University of Virginia, Don’t Discount Hegemony, p. www.cato-unbound.org/2011/02/11/john-owen/dont-discount-hegemony/)

Andrew Mack and his colleagues at the Human Security Report Project are to be congratulated. Not only do they present a study with a striking conclusion, driven by data, free of theoretical or ideological bias, but they also do something quite unfashionable: they bear good news. Social scientists really are not supposed to do that. Our job is, if not to be Malthusians, then at least to point out disturbing trends, looming catastrophes, and the imbecility and mendacity of policy makers. And then it is to say why, if people listen to us, things will get better. We do this as if our careers depended upon it, and perhaps they do; for if all is going to be well, what need then for us? Our colleagues at Simon Fraser University are brave indeed. That may sound like a setup, but it is not. I shall challenge neither the data nor the general conclusion that violent conflict around the world has been decreasing in fits and starts since the Second World War. When it comes to violent conflict among and within countries, **things have been getting better**. (The trends have not been linear—Figure 1.1 actually shows that the frequency of interstate wars peaked in the 1980s—but the 65-year movement is clear.) Instead I shall accept that Mack et al. are correct on the macro-trends, and focus on their explanations they advance for these remarkable trends. With apologies to any readers of this forum who recoil from academic debates, this might get mildly theoretical and even more mildly methodological. Concerning international wars, one version of the “nuclear-peace” theory is not in fact laid to rest by the data. It is certainly true that nuclear-armed states have been involved in many wars. They have even been attacked (think of Israel), which falsifies the simple claim of “assured destruction”—that any nuclear country A will deter any kind of attack by any country B because B fears a retaliatory nuclear strike from A. But the most important “nuclear-peace” claim has been about mutually assured destruction, which obtains between two robustly nuclear-armed states. The claim is that (1) rational states having second-strike capabilities—enough deliverable nuclear weaponry to survive a nuclear first strike by an enemy—will have an overwhelming incentive not to attack one another; and (2) we can safely assume that nuclear-armed states are rational. It follows that states with a second-strike capability will not fight one another. Their colossal atomic arsenals neither kept the United States at peace with North Vietnam during the Cold War nor the Soviet Union at peace with Afghanistan. But the argument remains strong that those arsenals did help keep the United States and Soviet Union at peace with each other. Why non-nuclear states are not deterred from fighting nuclear states is an important and open question. But in a time when calls to ban the Bomb are being heard from more and more quarters, we must be clear about precisely what the broad trends toward peace can and cannot tell us. They may tell us nothing about why we have had no World War III, and little about the wisdom of banning the Bomb now. Regarding the **downward trend in international war**, Professor Mack is friendlier to more palatable theories such as the “**democratic peace**” (democracies do not fight one another, and the proportion of democracies has increased, hence less war); the interdependence or “**commercial peace**” (states with extensive economic ties find it irrational to fight one another, and interdependence has increased, hence less war); and the notion that people around the world are more anti-war than their forebears were. Concerning the downward trend in civil wars, he favors theories of economic growth (where commerce is enriching enough people, violence is less appealing—a logic similar to that of the “commercial peace” thesis that applies among nations) and the end of the Cold War (which end reduced superpower support for rival rebel factions in so many Third-World countries). These are all **plausible mechanisms for peace**. What is more, none of them excludes any other; all could be working toward the same end. That would be somewhat puzzling, however. Is the world just lucky these days? How is it that an array of peace-inducing factors happens to be working coincidentally in our time, when such a magical array was absent in the past? The answer may be that one or more of these mechanisms reinforces some of the others, or perhaps some of them are mutually reinforcing. Some scholars, for example, have been focusing on whether economic growth might support democracy and vice versa, and whether both might support international cooperation, including to end civil wars. We would still need to explain how this charmed circle of causes got started, however. And here let me raise another factor, perhaps even less appealing than the “nuclear peace” thesis, at least outside of the United States. That factor is what international relations scholars call hegemony—specifically **American hegemony**. A theory that many regard as discredited, but that refuses to go away, is called hegemonic stability theory. The theory emerged in the 1970s in the realm of international political economy. It asserts that **for the global economy to remain open**—for countries to keep barriers to trade and investment low—**one powerful country must take the lead**. Depending on the theorist we consult, “taking the lead” entails paying for global public goods (keeping the sea lanes open, providing liquidity to the international economy), coercion (threatening to raise trade barriers or withdraw military protection from countries that cheat on the rules), or both. The theory is skeptical that international cooperation in economic matters can emerge or endure absent a hegemon. The distastefulness of such claims is self-evident: they imply that it is good for everyone the world over if one country has more wealth and power than others. More precisely, they imply that it has been good for the world that the United States has been so predominant. There is no obvious reason why hegemonic stability theory could not apply to other areas of international cooperation, including in security affairs, human rights, international law, peacekeeping (UN or otherwise), and so on. What I want to suggest here—suggest, not test—is that **American hegemony might just be a deep cause of the steady decline of political deaths in the world**. How could that be? After all, the report states that United States is the third most war-prone country since 1945. Many of the deaths depicted in Figure 10.4 were in wars that involved the United States (the Vietnam War being the leading one). Notwithstanding politicians’ claims to the contrary, a candid look at U.S. foreign policy reveals that the country is as ruthlessly self-interested as any other great power in history. The answer is that U.S. hegemony might just be a **deeper cause of the proximate causes** outlined by Professor Mack. Consider economic growth and openness to foreign trade and investment, which (so say some theories) **render violence irrational**. American power and policies may be responsible for these in two related ways. First, at least since the 1940s Washington has **prodded other countries to embrace the market capitalism** that entails economic openness and produces **sustainable economic growth**. The United States promotes capitalism for selfish reasons, of course: its own domestic system depends upon growth, which in turn depends upon the efficiency gains from economic interaction with foreign countries, and the more the better. During the Cold War most of its allies accepted some degree of market-driven growth. Second, the U.S.-led western victory in the Cold War damaged the credibility of alternative paths to development—communism and import-substituting industrialization being the two leading ones—and **left market capitalism the best model**. The end of the Cold War also involved an end to the billions of rubles in Soviet material support for regimes that tried to make these alternative models work. (It also, as Professor Mack notes, **eliminated the superpowers’ incentives to feed civil violence** in the Third World.) What we call **globalization** is **caused in part by the emergence of the United States as the global hegemon**. The same case can be made, with somewhat more difficulty, concerning the **spread of democracy**. Washington has supported democracy only under certain conditions—the chief one being the absence of a popular anti-American movement in the target state—but those conditions have become much more widespread following the collapse of communism. Thus in the 1980s the Reagan administration—the most anti-communist government America ever had—began to dump America’s old dictator friends, starting in the Philippines. Today Islamists tend to be anti-American, and so the Obama administration is skittish about democracy in Egypt and other authoritarian Muslim countries. But general U.S. material and moral support for liberal democracy remains strong.

### Hegemony Impact – Great Power Wars

#### Primacy prevents great power wars. The alternative is multipolarity and instability.

**Kagan**,3/14/**2012** (Robert – senior fellow of foreign policy at the Center on the United States and Europe, America Has Made the World Freer, Safer and Wealthier, p. http://www.brookings.edu/opinions/2012/0314\_us\_power\_kagan.aspx)

We take a lot for granted about the way the world looks today -- the widespread freedom, the unprecedented global prosperity (even despite the current economic crisis), and the absence of war among great powers. In 1941 there were only a dozen democracies in the world. Today there are more than 100. For four centuries prior to 1950, global GDP rose by less than 1 percent a year. Since 1950 it has risen by an average of 4 percent a year, and billions of people have been lifted out of poverty. The first half of the 20th century saw the two most destructive wars in the history of mankind, and in prior centuries war among great powers was almost constant. But for the past 60 years no great powers have gone to war. This is the world America made when it assumed global leadership after World War II. Would this world order survive if America declined as a great power? Some American intellectuals insist that a "Post-American" world need not look very different from the American world and that all we need to do is "manage" American decline. But that is wishful thinking. If the balance of power shifts in the direction of other powers, the world order will inevitably change to suit their interests and preferences. Take the issue of democracy. For several decades, the balance of power in the world has favored democratic governments. In a genuinely post-American world, the balance would shift toward the great power autocracies. Both China and Russia already protect dictators like Syria's Bashar al-Assad. If they gain greater relative influence in the future, we will see fewer democratic transitions and more autocrats hanging on to power. What about the free market, free trade economic order? People assume China and other rising powers that have benefited so much from the present system would have a stake in preserving it. They wouldn't kill the goose that lays the golden eggs. But China's form of capitalism is heavily dominated by the state, with the ultimate goal being preservation of the ruling party. Although the Chinese have been beneficiaries of an open international economic order, they could end up undermining it simply because, as an autocratic society, their priority is to **preserve the state's control of wealth** and the power it brings. They might kill the goose because **they can't figure out how to keep both it and themselves alive**. Finally, what about the long peace that has held among the great powers for the better part of six decades? Many people imagine that American predominance will be replaced by some kind of multipolar harmony. But multipolar systems have **historically been neither stable nor peaceful**. War among the great powers was a common, if not constant, occurrence in the long periods of multipolarity in the 16th, 17th, and 18th centuries. The 19th century was notable for two stretches of great-power peace of roughly four decades each, punctuated, however, by major wars among great powers and culminating in World War I, the most destructive and deadly war mankind had known up to that point. The era of American predominance has shown that there is no better recipe for **great-power peace** than certainty about who holds the upper hand. Many people view the present international order as the inevitable result of human progress, a combination of advancing science and technology, an increasingly global economy, strengthening international institutions, evolving "norms" of international behavior, and the gradual but inevitable triumph of liberal democracy over other forms of government -- forces of change that transcend the actions of men and nations. But there was nothing inevitable about the world that was created after World War II. International order is not an evolution; it is an imposition. **It is the domination of one vision over others** -- in America's case, the domination of liberal free market principles of economics, democratic principles of politics, and a peaceful international system that supports these, over other visions that other nations and peoples may have. The present order will last only as long as those who favor it and benefit from it retain the will and capacity to defend it. If and when American power declines, the institutions and norms American power has supported will decline, too. Or they may collapse altogether as we transition into another kind of world order, or into disorder. We may discover then that the United States was essential to keeping the present world order together and that **the alternative to American power was not peace and harmony but chaos and catastrophe** -- which was what the world looked like right before the American order came into being.

#### US leadership prevents great powers wars.

**Khalilzad**, 2/8/**2011** (Zalmay – former United States ambassador to Afghanistan, Iraq and the United Nations, The Economy and National Security, National Review, p. http://www.nationalreview.com/articles/259024/economy-and-national-security-zalmay-khalilzad?page=3%29)

We face this domestic challenge while other major powers are experiencing rapid economic growth. Even though countries such as China, India, and Brazil have profound political, social, demographic, and economic problems, their economies are growing faster than ours, and this could alter the global distribution of power. These trends could in the long term produce a multi-polar world. If U.S. policymakers fail to act and other powers continue to grow, it is not a question of whether but when a new international order will emerge. The closing of the gap between the United States and its rivals could **intensify geopolitical competition** among major powers, increase incentives for local powers to play **major powers against one another**, and undercut our will to preclude or respond to international crises because of the higher risk of escalation. **The stakes are high**. In modern history, the longest period of peace among the great powers has been the era of U.S. leadership. By contrast, multi-polar systems have been unstable, with their competitive dynamics resulting in frequent crises and **major wars among the great powers**. Failures of multi-polar international systems **produced both world wars**. American retrenchment could have devastating consequences. Without an American security blanket, regional powers could rearm in an attempt to balance against emerging threats. Under this scenario, there would be a **heightened possibility of arms races, miscalculation, or other crises spiraling into all-out conflict**. Alternatively, in seeking to accommodate the stronger powers, weaker powers may shift their geopolitical posture away from the United States. Either way, hostile states would be **emboldened to make aggressive moves in their regions**. As rival powers rise, Asia in particular is likely to emerge as a zone of great-power competition. Beijing’s economic rise has enabled a dramatic military buildup focused on acquisitions of naval, cruise, and ballistic missiles, long-range stealth aircraft, and anti-satellite capabilities. China’s strategic modernization is aimed, ultimately, at denying the United States access to the seas around China. Even as cooperative economic ties in the region have grown, China’s expansive territorial claims — and provocative statements and actions following crises in Korea and incidents at sea — have roiled its relations with South Korea, Japan, India, and Southeast Asian states. Still, the United States is the most significant barrier facing Chinese hegemony and aggression.

## Climate Advantage Extensions

### Ext – HSR Solves CO2

#### HSR reduces six billion pounds of CO2 emissions annually --- transportation emission is the largest CO2 emitter

**Rogers**, Spring **2011** (Joshua – J.D. University of Illinois College of Law, The Great Train Robbery: How Statutory Construction May Have Derailed an American High Speed Rail System, University of Illinois Journal of Law, Technology & Policy, p. Lexis)

A high speed rail network would reduce the U.S.'s negative impact on the environment. As recently as 2006, the U.S. emitted 5,902.75 million metric tons of carbon dioxide (CO2) annually, n58 placing the U.S. second, behind China, among the world's countries in total annual CO2 emissions. n59 Moreover, the U.S. placed second, behind Australia, in per capita CO2 emissions among countries with a population of more than 10 million. n60 As the **largest CO2 emitter** among end-use sectors, n61 transportation constitutes approximately one-third of all CO2 emissions in the U.S. n62 High speed rail employs "green" technologies that consume **one-third less energy per passenger mile** than automobile travel. n63 Also, high speed rail would transport passengers closer to their city center destinations, thereby, reducing unneeded energy consumption by additional travel to and from airports. n64 It is estimated that a high speed rail network would result in an annual reduction of 6 billion pounds of CO2 emissions for the U.S. n65 These statistics have led several [\*223] environmental groups, such as the Center for Clean Air Policy n66 and the Sierra Club n67 to endorse a U.S. high speed rail system.

#### HSR reduces emissions by trading off with oil-dependent alternatives

**Todorovich, Schned and Lane 2011** (Petra – director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 19-20)

Energy efﬁciency and ridership: High-speed rail offers greater operating efﬁciency on a per passenger mile basis than competing modes, such as single-occupancy automobiles or airplanes that require signiﬁcant amounts of fuel to get off the ground. For example, Shinkansen trains are estimated to use one-quarter the energy of airplanes and one-sixth that of private automobiles per passenger mile (JR Central 2011a). To achieve environmental beneﬁts, high-speed trains must maximize load factors to realize the greatest efﬁciencies. As high-speed rail ridership increases, so does its relative energy efﬁciency, whereas a high-speed train carrying no passengers ceases to be efﬁcient in any sense. In regions where the number of total trips is not growing, high-speed rail can bring about a net reduction of energy use through mode shift by capturing passengers from automobile or airplane trips. In regions like California where population and trips are projected to keep growing, high-speed rail can help reduce the energy and climate impacts on a per passenger basis through a combination of mode shift and attracting new passengers to high-speed rail. Energy mix: High-speed rail is the only available mode of long-distance travel that currently is not dependent on motor fuels. High-speed rail is powered by electricity, which is not without environmental problems depending on its source (see table 2). If it is powered by electricity generated from fossil fuels, such as coal or natural gas that discharge harmful greenhouse gas emissions, then its environmental beneﬁts are limited. However, electricity is generally considered an improvement over petroleum-generated power and provides a crucial advantage as the United States aims to reduce its dependence on foreign oil. Amtrak’s Northeast Corridor and parts of the Keystone Corridor (connecting Harrisburg, Pennsylvania to Philadelphia) are electriﬁed. Most other conventional passenger trains in America operate on freight rail lines and are powered by diesel fuel. Energy planning needs to be a part of the planning for high-speed rail to ensure the reduction of greenhouse gases and other harmful pollutants. Even with the current energy mix that includes fossil fuel sources, however, high-speed rail can yield signiﬁcant environmental beneﬁts. A recent study by the University of Pennsylvania (2011) found that a new high-speed line in the Northeast Corridor, powered by electricity from the current energy mix, would divert nearly 30 million riders from cars and planes, attract 6 million new riders, and still reduce car emissions of carbon monoxide by more than 3 million tons annually. The system would also result in a reduction of carbon dioxide emissions if the energy mix were shifted to low carbon emitting sources.

#### High-speed rail funding key to green mobility --- massively cuts pollution from CO2

**Cedeno 10** (Ken, Reporter – Time, “Can High-Speed Rail Succeed in America?”, Time, 1-29, http://www.time.com/time/health/article/0,8599,1957575,00.html)

There was one part of the speech, however, that no green could fault: Obama's call for the creation of a high-speed rail system as a way to generate green jobs, enhance economic productivity and reduce carbon emissions. On Thursday, Jan. 28, the White House announced the awarding of $8 billion in stimulus funding to kick-start high-speed-rail projects and improve service in 13 corridors across the country. Obama and Vice President Joe Biden traveled to Tampa, Fla., to announce the projects, which include the construction of an 84-mile high-speed track from Tampa to Orlando. [(See the 50 best inventions of 2009.)](http://www.time.com/time/specials/packages/0,28757,1934027,00.html) "We want to start looking deep into the 21st century and say to ourselves, There's no reason why other countries can build high-speed rail lines and we can't," Obama told a crowd in a University of Tampa arena. "Right here in Tampa, we're building the future." That's a nice sentiment, but America's antiquated rail system will have to advance a long way just to make it to the present, let alone the future. U.S. intercity railroads are a laughingstock compared with those in most other developed nations — and, increasingly, even those in developing nations like China, which is investing more than $300 billion to build more than 16,000 miles of high-speed track by 2020. Today you can travel the 250 miles from Paris to Lyon on the high-speed TGV in two hours. Covering a similar distance from Philadelphia to Boston takes some five hours, and that's on an Amtrak Acela train, the closest thing the U.S. has to high-speed rail. "Every other major industrialized nation has recognized that high-speed rail is key to economic growth and mobility," says Petra Todorovich, director of the America 2050 program at the Regional Planning Association. "It's time for America to realize that as well." [(See the most important cars of all time.)](http://www.time.com/time/specials/2007/article/0,28804,1701729_1701728,00.html) When the White House announced last spring that it would allocate billions of stimulus dollars to high-speed-rail projects, states submitted 45 applications for more than $50 billion in aid. In the end, the Federal Railroad Administration decided to distribute $8 billion in funding to 31 states, with the biggest single grants going to California ($2.3 billion) and Florida ($1.3 billion). But whatever the public's vision of a sparkling new 150-m.p.h. bullet train like those in Japan and Europe, the reality is that not all, or even most, of the stimulus money will go toward creating entirely new rail service. Instead, much of the initial funding will be spent improving and speeding up existing service. In Florida, however, the money will in fact help build a new stretch of track between Tampa and Orlando, which will allow trains to travel at speeds up to 168 m.p.h. It is the first leg of an intercity corridor that is expected to continue southward to Miami. Demographically, Florida is an ideal state in which to launch the rail projects. Together, the metro areas of Tampa and Orlando are a major economic unit, home to more than 3.4 million people and close enough on the map to make high-speed rail competitive with air and auto travel. The region is also a tourist hub, which makes it likely that a Tampa-Orlando rail line will be well-used by Americans from around the country. That makes it a smart advertisement for other high-speed-rail projects back in their home regions. [(Read "A Brief History of High-Speed Rail.")](http://www.time.com/time/nation/article/0,8599,1892463,00.html) Florida's project is also an optimal test case, having already been approved by the state and relatively free of red tape. The line is set to open by 2015, the environmental-impact assessment has already been done, and the state owns more than 90% of the route's right of way. That should reduce the property struggles and legal challenges that have slowed other new rail projects. "Florida is relatively cheap compared to other projects," says Todorovich. "This is the sort of project they can use to build support on a national basis. You need a success." Still, the initial round of $8 billion — which Biden referred to as "seed money" during his remarks in Tampa — is just a tiny percentage of what it would cost to significantly overhaul the country's rail system. And there are concerns that by spreading the funds to so many different projects in so many different states, it won't be possible to make a real difference in any one place, as Mark Reutter wrote in a new report for the Progressive Policy Institute. It doesn't help that the one region that could most obviously benefit from truly high-speed rail — the Boston-to-Washington corridor — received a mere $112 million in funding, in part because building new track in the congested area would be prohibitively expensive and politically challenging. Nevertheless, high-speed rail is an idea whose time has come — at least for environmentalists. According to Environment America, high-speed rail uses a third less energy per mile than auto or air travel, and a nationwide system could reduce oil use by 125 million bbl. a year. In addition, high-speed rail represents the kind of long-term infrastructure investment that will pay back for decades, just as the interstate highway system of the 1950s has. "This is a down payment on a truly national program," said Biden, who has logged more than 7,900 round trips of his own on Amtrak. "It will change the way we travel and change the way we work and live." Greens will be happy to see that.

#### Studies show that HSR will reduce CO2 emissions

**C**ommunity of **E**uropean **R**ailways, 12/9/**2011** (Wider benefits of high speed rail confirmed in new studies, p. <http://www.cer.be/press/press-releases/2270-wider-benefits-of-high-speed-rail-confirmed-in-new-studies>)

The carbon footprint of high speed rail can be up to 14 times less carbon intensive than car travel and up to 15 times less than aviation even when measured over the full life-cycle of planning, construction and operation. The figures are outlined in two new research reports detailing the ways in which railways contribute to a more sustainable transport system. Using case studies and new data, the reports, carried out by consultancy Systra for the International Union of Railways (UIC), also demonstrates the benefits of high speed rail in terms of speed, reliability, comfort and safety. The main report, “High Speed Rail and Sustainability” considers the social, economic and environmental aspects of high speed rail performance, and makes a compelling case for why rail has major advantages in all three areas. The accompanying background report, “Carbon Footprint of High Speed Rail Lines”, takes four case studies of high-speed rail lines (two in Europe and two in Asia) and carries out a transparent, robust assessment of carbon emissions for each route, including the planning, construction (track and rolling stocks) and operation phases. For example, emissions on the high speed Méditerranée line from Valence to Marseille average 11.0g CO2 per passenger km, compared to 151.6g CO2 per passenger km for car and 164.0g CO2 per passenger km for air. The environmental ‘pay back’ time for this route – the length of time it takes for the emissions saved by the impact of the new high-speed services to overtake the additional emissions produced through the line’s construction – was just 5.3 years. New high speed lines can lead to significant reductions in CO2 emissions by creating modal shift from air to rail. For example, 48,000 less tonnes of CO2 are now produced on the Madrid to Seville corridor following completion of the high-speed line - and have a lower direct land-take requirement than roads (2.5ha/km v. 1.3ha/km). High speed rail, which is only operated on the electrified network, can directly benefit from the “greening” of the energy supply network, which over time will reduce its carbon emissions even further. The economic benefits of high speed rail are also featured: the reports show how high speed rail supports and helps economic development in the cities that are linked by these routes. An example cited is the French city of Lille, where a new inner-city high-speed station was built to help stimulate regeneration of the city. Over a 13-year period from 1990-2003, the number of tourists in the city increased 15-fold.

### Ext – HSR Solves Traffic/Congestion

#### HSR would solve traffic and air travel congestion

**Grossman**, 8/25/**2008** (David, The case for high speed rail in America, USA Today, p. http://www.usatoday.com/travel/columnist/grossman/2008-08-22-high-speed-rail\_N.htm)

The proposal has sparked numerous fights within the state. There are many vocal opponents to the high speed rail project while others want to amend the proposition before it is even voted upon. Critics and those with a self interest in keeping the status quo maintain that America's suburban sprawl is different from Europe or Japan and that the trains will travel empty along the high speed route. But past evidence would suggest otherwise. Since Amtrak beefed up its service in the Northeast corridor with the launch of the high speed Acela trains, their market share has grown fourfold, from 12% just a few years ago to more than 50% of the air/rail market in the Northeast Corridor today. And a huge proportion of those Acela riders are business travelers. Of all the money-losing routes on the Amtrak network, the Northeast corridor is the one exception and a similar high speed service in the most populous state on the other side of the country would likely garner the same effect, relieving much of the congestion on the roads and in the skies that are the bane of California. High speed rail is not for long distance travel. High speed rail works well with segments of 250 to 500 miles where the two to four hour train ride rivals the total time of air travel, including the trip to the airport and all that time waiting around. Routes like Chicago to St. Louis, Chicago to Detroit, or Dallas to Houston and many other similar distanced major city pairs are a natural fit for high speed rail lines. If high speed rail is implemented correctly, as has been done in many European countries with rail lines running right into airport terminals, transfer from plane to train will be seamless and render the need for flights of less than 500 miles unnecessary in most cases. The fuel and emissions savings of electrified rail lines would be enormous and the productivity gains amassed from unclogging our skies and highways would be substantial if such a national high speed rail network could be implemented and fully integrated with the existing air transport system.

### Warming Bad – Extinction

#### Warming causes extinction

**Brandenberg 1999** (Dr. John – Physicist, Dead Mars Dying Earth, p. 232-3)

The ozone hole expands, driven by a monstrous synergy with global warming that puts more catalytic ice crystals into the stratosphere, but this affects the far north and south and not the major nations’ heartlands. The seas rise, the tropics roast but the media networks no longer cover it. The Amazon rainforest becomes the Amazon desert. Oxygen levels fall, but profits rise for those who can provide it in bottles. An equatorial high pressure zone forms, forcing drought in central Africa and Brazil, the Nile dries up and the monsoons fail. Then inevitably, at some unlucky point in time, a major unexpected event occurs—a major volcanic eruption, a sudden and dramatic shift in ocean circulation or a large asteroid impact (those who think freakish accidents do not occur have paid little attention to life or Mars), or a nuclear war that starts between Pakistan and India and escalates to involve China and Russia . . . Suddenly the gradual climb in global temperatures goes on a mad excursion as the oceans warm and release large amounts of dissolved carbon dioxide from their lower depths into the atmosphere. Oxygen levels go down precipitously as oxygen replaces lost oceanic carbon dioxide. Asthma cases double and then double again. Now a third of the world fears breathing. As the oceans dump carbon dioxide, the greenhouse effect increases, which further warms the oceans, causing them to dump even more carbon. Because of the heat, plants die and burn in enormous fires which release more carbon dioxide, and the oceans evaporate, adding more water vapor to the greenhouse. Soon, we are in what is termed a runaway greenhouse effect, as happened to Venus eons ago. The last two surviving scientists inevitably argue, one telling the other, “See! I told you the missing sink was in the ocean!”Earth, as we know it, dies. After this Venusian excursion in temperatures, the oxygen disappears into the soil, the oceans evaporate and are lost and the dead Earth loses its ozone layer completely. Earth is too far from the Sun for it to be the second Venus for long. Its atmosphere is slowly lost—as is its water—because of ultraviolet bombardment breaking up all the molecules apart from carbon dioxide. As the atmosphere becomes thin, the Earth becomes colder. For a short while temperatures are nearly normal, but the ultraviolet sears any life that tries to make a comeback. The carbon dioxide thins out to form a thin veneer with a few wispy clouds and dust devils. Earth becomes the second Mars—red, desolate, with perhaps a few hardy microbes surviving.

### Warming Bad – CCP Instability

#### Warming causes CCP instability

**IPS 7** (Inter Press News Service, “Global Warming Fuels Inflation”, 9-5, http://ipsnews.net/news.asp?idnews=39144)

Yet government officials now fear that the combined effects of climate change and inflation pressures could destabilise public mood ahead of the 17th Communist Party Congress -- a five-yearly meeting, designed to chart the party’s policy and seal the legacy of its current leaders. Drought is already affecting 22 of China’s 31 provinces. Meteorological experts say that global warming would exacerbate things as a one-degree rise in temperature could aggravate ground water evaporation by seven percent. Zheng Guogan, head of the State Meteorological Administration forecasts global warming will cut China’s annual grain harvest by up to 10 percent. That would mean about 50 million tonnes less grain in the current tight supply situation and a potential for further inflation. "Given the tightened food supply in the international market, a decline in domestic grain production could lead to more price hikes," Song Tingmin, vice-president of the China National Association of Grain told the China Daily. A surge in food prices saw China’s consumer price index (CPI) rise to a 10-year high of 5.6 percent in July, far above the government’s upper target of 3 percent for the whole year. Economists say the August inflation rose even higher on the back of soaring pork costs. The social dimensions of such leaps in inflation are not lost on a government, which remembers that 1989 pro-democracy movement that saw thousands of students, workers and intellectuals out in street protests was triggered by public anger over inflation.

#### CCP will lash-out – killing a billion

**Rexing 5** (Sen, Staff Writer – The Epoch Times, “CCP Gambles Insanely to Avoid Death”, Epoch Times, 8-3, <http://www.theepochtimes.com/news/5-8-3/30931.html>)

Since the Party’s life is “above all else,” it would not be surprising if the CCP resorts to the use of biological, chemical, and nuclear weaponsin its attempt to postpone its life. The CCP, that disregards human life, would not hesitate to kill two hundred million Americans, coupled with seven or eight hundred million Chinese, to achieve its ends. The “speech,” free of all disguises, lets the public see the CCP for what it really is: with evil filling its every cell, the CCP intends to fight all of mankind in its desperate attempt to cling to life. And that is the theme of the “speech.” The theme is murderous and utterly evil. We did witness in China beggars who demanded money from people by threatening to stab themselves with knives or prick their throats on long nails. But we have never, until now, seen a rogue who blackmails the world to die with it by wielding biological, chemical, and nuclear weapons. Anyhow, the bloody confession affirmed the CCP’s bloodiness: a monstrous murderer, who has killed 80 million Chinese people, now plans to hold one billion people hostageand gamble with their lives.

### Warming Bad – Environment

#### Warming makes worldwide species extinction inevitable

**Brown 8** (Lester E., Founder – Earth Policy Institute, “Plan B 3.0: Mobilizing to Save Civilization”)

Against this backdrop of record increases, the projections that the earth's average temperature will rise 1.1-6.4 degrees Celsius (2.0-11.5 degrees Fahrenheit) during this century seem all too possible. These projections are the latest from the Intergov­ernmental Panel on Climate Change (IPCC), the body of more than 2,500 scientists from around the world that in 2007 released a consensus report affirming humanity's role in climate change." The IPCC-projected rise in temperature is a global average. In reality, the rise will be very uneven. It will be much greater over land than over oceans, in the high northern latitudes than over the equator, and in the continental interiors than in coastal regions. Higher temperatures diminish crop yields, melt the snow/ice reservoirs in the mountains that feed the earth's rivers, cause more-destructive storms, increase the area affected by drought, and cause more frequent and destructive wildfires. In a paper presented at the American Meteorological Soci­ety's annual meeting in San Diego, California, in January 2005, a team of scientists from the National Center for Atmospheric Research reported a dramatic increase in the land surface affect­ed by drought over the last few decades. The area experiencing very dry conditions expanded from less than 15 percent of the earth's total land area in the 1970s to roughly 30 percent by 2002. The scientists attributed part of the change to a rise in temperature and part to reduced precipitation, with high temperatures becoming progressively more important during the latter part of the period. Lead author Aiguo Dai reported that most of the drying was concentrated in Europe and Asia, Cana­da , western and southern Africa, and eastern Australia.l! Researchers with the U.S. Department of Agriculture's Forest Service, drawing on 85 years of fire and temperature records, reported in August 2004 that even a 1.6-degree-Celsius rise in summer temperature could double the area of wildfires in the I 1 western states. 12 Ecosystems everywhere will be affected by higher tempera­tures, sometimes in ways we cannot easily predict. The 2007 IPCC report notes that a rise in temperature of 1 degree Celsius will put up to **30 percent of all species at risk of extinction**. The Pew Center on Global Climate Change sponsored a meta-study analyzing some 40 scientific reports that link rising temperature with changes in ecosystems. Among the many changes reported are spring arriving nearly two weeks earlier in the United States, tree swallows nesting nine days earlier than they did 40 years .lg0, and a northward shift of red fox habitat that has it encroaching on the Arctic fox's range. Inuits have been surprised h the appearance of robins, a bird they have never seen before. Indeed, there is no word in Inuit for "robin."13 The National Wildlife Federation (NWF) reports that if temperatures continue to rise, by 2040 one out of five of the Pacific Northwest's rivers will be too hot for salmon, steelhead, and trout to survive. Paula Del Giudice, Director of NWF's North­west Natural Resource Center, notes that "global warming will add an enormous amount of pressure onto what's left of the region's prime cold-water fish habitat." 14 Douglas Inkley, NWF Senior Science Advisor and senior author of a report to The Wildlife Society, notes, "We face the prospect that **the world of wildlife that we now know**-and many of the places we have invested decades of work in conserving as refuges and habitats for wildlife-**will cease to exist** ,15 we know them, unless we change this forecast."15

#### Warming destroys every ecosystem and causes mass extinction

**Ryan 92** (J.C., Worldwatch Institute, Worldwatch Paper 108, September/October, p. 10-11)

Now evolution is again being thrown off its usual course – but not by a gradual change in global temperature or an explosive collision between the Earth and a giant asteroid, both of which are primary suspects in the demise of the dinosaurs. This time, the collision is between the insatiable demands of one species and the finite capacity of its global habitat. The result is rates of extinction **several thousand times normal levels**. Biological diversity – the variety not just of species, but of genes and ecosystem – is diminishing at precipitous rates throughout the world. Species are vanishing most rapidly – and most notably – from dwindling tropical forests. But mass extinction is everywhere; amphibians are declining worldwide; three-quarters of the world’s species of birds are declining in population or threatened with extinction; and genetic varieties of crops, fish, and livestock are all rapidly disappearing, near and far from the equator. Yet the worst may still lie ahead. If human-generated global warming comes to pass as **rapidly** as most climatologists predict, another wave of extinction – even more massive than the one already in progress – is in store. While the problems of declining biodiversity and global warming have each attracted extensive attention, the relationship between them has not. Unfortunately, this unholy alliance will probably make the world’s current **biological collapse** **pale in comparison**. With a rapidly changing climate, it is not an overstatement to say that practically **every habitat on the planet** will be put at risk. Most species will face the choice of either adapting or relocating; many will fail to make the transition.

### Warming Bad – Free Trade

#### Climate oscillations collapse global growth and trade – kills billions

**Milbrath 94** (Lester, Professor Emeritus of Environmental Public Policy – SUNY Buffalo, “Climate and Chaos: Societal Impacts of Sudden Weather Shifts”, The Futurist, p. 27-28)

Another scenario suggests that there could be an extended period, perhaps a decade or two, when there is an oscillation-type chaos in the climate system. Plants will be especially vulnerable to oscillating chaos, since they are injured or die when climate is too hot or too cold, too dry or too wet. And since plants make food for all other creatures, plant dieback would lead to severe declines in agricultural production. Farm animals and wildlife would die in large numbers. Many humans would also starve. Several years of climate oscillations could kill billions of people. The loss of the premise of continuity would also precipitate collapse of world financial markets. That collapse would lead to a sharp decline in commodity markets, world trade, factory output, retail sales, research and development, tax income for governments, and education. Such nonessential activities such as tourism, travel, hotel occupancy, restaurants, entertainment, and fashion would be severely affected. Billions of unemployed people would drastically reduce their consumption, and modern society's vaulted economic system would collapse like a house of cards.

#### Nuclear war

**Spicer 96** (Michael, economist; member of the British Parliament, The Challenge from the East and the Rebirth of the West, p. 121)

The choice facing the West today is much the same as that which faced the Soviet bloc after World War II: between meeting head-on the challenge of world trade with the adjustments and the benefits that it will bring, or of attempting to shut out markets that are growing and where a dynamic new pace is being set for innovative production. The problem about the second approach is not simply that it won't hold: satellite technology alone will ensure that he consumers will begin to demand those goods that the East is able to provide most cheaply. More fundamentally, it will guarantee the emergence of a fragmented world in which natural fears will be fanned and inflamed. A world divided into rigid trade blocs will be a deeply troubled and unstable place in which suspicion and ultimately envy will possibly erupt into a major war. I do not say that the converse will necessarily be true, that in a free trading world there will be an absence of all strife. Such a proposition would manifestly be absurd. But to trade is to become interdependent, and that is a good step in the direction of world stability. With nuclear weapons at two a penny, stability will be at a premium in the years ahead.

### Warming Bad – Plankton

#### Climate change kills plankton

**Brahic 6** (Catherine, Environment Reporter – New Scientist, “Warming Oceans Produce Less Phytoplankton”,

New Scientist, 12-6, http://environment.newscientist.com/channel/earth/dn10743-warming-oceans-produce-less-phytoplankton.htm)

As the Earth’s oceans warm, the masses of tiny plants growing at their surface is declining, say US researchers. Their results show that the productivity of global oceans is tightly linked to climate change and has steadily decreased between 1999 and 2004. The team was led by Michael Behrenfeld, at Oregon State University, US, and used a sensor on NASA’s SeaWiFS satellite to measure different shades of green in the ocean (watch an animation of the satellite at work, mpeg file). This allowed them to watch how chlorophyll in the oceans ebbed and flowed over the past 10 years. They looked at how these changes fitted changes in ocean temperatures and the predictions of computer models. Their research, published in Nature, revealed two phases. Between 1997 and 1998, the amount of phytoplankton in the seas rose. At this time, the oceans were cooling after the strongest ever El Niño, which had warmed ocean temperatures. From 1999 to 2004, there was a general warming of the oceans and, the images from space revealed, a **persistent decrease in phytoplankton**. In some regions, the drops in ocean productivity were often over 30%. Globally, the reductions meant that, between 1999 and 2004, about 190 million tonnes of carbon per year were not absorbed by the tiny plants and converted into organic matter. After 2004, there was a small upturn in productivity (see Cooling oceans buck global trend).

#### Plankton losses trigger ecosystem collapse that risks extinction

**Alois and Cheng 7** (Paul and Victoria, The Arlington Institute, “Keystone Species Extinction Overview”, July, http://www.arlingtoninstitute.org/wbp/species-extinction/443)

The most recent paradigm in ecological sciences posits that environmental change happens in a rapid, non-linear fashion. This paper will examine certain species of organisms that have the potential, once their numbers are low enough, to trigger a **sudden collapse** in the cycles that provide human beings with food. 1. Aquatic Systems 1.1. Plankton Plankton is a blanket term for many species of microorganisms that drift in open water and make up the base of the aquatic food chain. There are two types of plankton, phytoplankton and zooplankton. Phytoplankton make their own food through the process of photosynthesis, while zooplankton feed on phytoplankton. Zooplankton are in turn eaten by larger animals. In this way these tiny organisms sustain all life in the oceans. According to the NASA, phytoplankton populations in the northern oceans have declined by as much as 30% since 1980.[[4]](http://www.arlingtoninstitute.org/wbp/species-extinction/443#_ftn4) While the cause of this decline remains uncertain, there are several theories. [Continues] The preservation of the **fundamental cornerstones** of the ecosystem must become a foremost goal in human advancement, and it is clear that their destruction must be stopped. Plankton supporting abundant sea life are dying, fish that is a staple part of the diet of many people around the world are being fished to extinction, bees pollinating crops are threatened by many factors, and topsoil sustaining agriculture is disappearing. To solve these problems, people must also address bigger problems caused by human activity such as climate change, the destruction of habitats, and the depletion of resources due to careless use. If any of these species examined should be reduced to a low enough level, **consequences for our own survival** would be profound. The loss of these actors is happening rapidly, and it is crucial that this be stopped and reversed as soon as possible.

### Warming Bad – Resource Wars

#### Global warming causes resource wars – sparking nuclear war

**Schwartz and Randall**, October **2003** (Peter – partner in the Monitor Group and chair of Global Business Network, and Doug – senior practitioner at Global Business Network, Pentagon Report: “An Abrupt Climate Change Scenario and Its Implications for United States National Security,” p. http://www.greenpeace.org/multimedia/download/1/417492/0/pentagon-on-climate-change.pdf)

As famine, disease, and weather-related disasters strike due to the abrupt climate change, many countries’ needs will **exceed their carrying capacity**. This will create a **sense of desperation**, which is likely to lead to **offensive aggression** in order to reclaim balance. Imagine eastern European countries, struggling to feed their populations with a falling supply of food, water, and energy, eyeing Russia, whose population is already in decline, for access to its grain, minerals, and energy supply. Or, picture Japan, suffering from flooding along its coastal cities and contamination of its fresh water supply, eying Russia’s Sakhalin Island oil and gas reserves as an energy source to power desalination plants and energy-intensive agricultural processes. Envision Pakistan, India, and China – all armed **with nuclear weapons** – skirmishing at their borders over refugees, access to shared rivers, and arable land. Spanish and Portuguese fishermen might fight over fishing rights – leading to conflicts at sea. And, countries including the United States would be likely to better secure their borders. With over 200 river basins touching multiple nations, we can expect conflict over access to water for drinking, irrigation, and transportation. The Danube touches twelve nations, the Nile runs though nine, and the Amazon runs through seven.

### Warming Bad – Soil Erosion

#### Warming causes soil erosion

**Nearing 4** (M.A., Agricultural Research Service – USDA, et al, “Expected Climate Change Impacts on Soil Erosion Rates: A Review”, Journal of Soil and Water Conservation, 59(1))

Global warming is expected to lead to a more vigorous hydrological cycle, including more total rainfall and more frequent high intensity rainfall events. Rainfall amounts and intensities increased on average in the United States during the 20th century, and according to climate change models they are expected to continue to increase during the 21st century. These rainfall changes, along with expected changes in temperature, solar radiation, and atmospheric CO2 concentrations, will have **significant impacts on soil erosion rates**. The processes involved in the impact of climate change on soil erosion by water are complex, involving changes in rainfall amounts and intensities, number of days of precipitation, ratio of rain to snow, plant biomass production, plant residue decomposition rates, soil microbial activity, evapotranspiration rates, and shifts in land use necessary to accommodate a new climatic regime. This paper reviews several recent studies conducted by the authors that address the potential effects of climate change on soil erosion rates. The results show cause for concern. Rainfall erosivity levels may be on the rise across much of the United States. Where rainfall amounts increase, erosion and runoff will increase at an even greater rate: the ratio of erosion increase to annual rainfall increase is on the order of 1.7. Even in cases where annual rainfall would decrease, system feedbacks related to decreased biomass production could lead to greater susceptibility of the soil to erode. Results also show how farmers' response to climate change can potentially exacerbate, or ameliorate, the changes in erosion rates expected.

#### Soil erosion causes extinction

**Asabe 2** (American Society of Agricultural Engineers, “In Defense of Soil and Water Resources in the United States: Soil Erosion Research Priorities”, December, http://www.asabe.org/pr/soilerosion.html)

Our soil resource is vital to the survival of the human race. Not only does it provide the **literal foundation** of our existence, it is the source of most of the agricultural products that sustain us and our way of life—food, fiber, timber, and energy. Because damages to soil quality are nearly always permanent, preservation of this resource is critically important to maintaining agricultural productivity and environmental quality. One of the most widespread threats to soil quality is wind and water erosion, an ever-occurring process that impacts our lives in numerous ways, the direst of which is lost food production. It is estimated that soil erosion is damaging the productivity of 29% (112 million acres) of U.S. cropland and is adversely affecting the ecological health of 39% (145 million acres) of rangeland. In addition to on-site soil loss, erosion results in off-site sediment movement that can cause problems downstream. Sediment can deposit and clog drainage ways, increase potential for flooding, decrease reservoir capacity, and carry nutrients and pesticides that degrade water quality. Current assessments by the U.S. Environmental Protection Agency of impaired water bodies indicate that 40% of the stream miles and 45% of the lake and reservoir areas are impaired because of sediment. Therefore, minimizing erosion is not only important for saving the soil, it is essential for preserving potable water resources and improving water and air quality.

### Warming Bad – South Asia

#### Warming causes water shortages and conflict in South Asia

**Lynas 8** (Mark, Environmental Journalist – NG, “Six Degrees: Our Future on a Hotter Planet, National Geographic, p. 336)

With India particularly dependent on hydroelectric power generation, dwindling summer flows may lead to blackouts and energy shortages during the hottest months of the year. Two of the Indus River's major tributaries-the Chenab and the Sutlej-arise in India and flow into Pakistan. Both will also be suffering the effects of deglaciation in their upper reaches. **Conflicts may well break out between these two nuclear-armed countries as water supplies dwindle** **and** political **leaders quarrel** over how much can be stored behind dams in upstream reservoirs.

#### Extinction

**Fai 1** (Ghulam Nabi, Executive Director of the Kashmiri American Council, July 8, The Washington Times, “The Most Dangerous Place,” p. B4)

The most dangerous place on the planet is Kashmir, a disputed territory convulsed and illegally occupied for more than 53 years and sandwiched between nuclear-capable India and Pakistan. It has ignited two wars between the estranged South Asian rivals in 1948 and 1965, and a third could trigger nuclear volleys and a nuclear winter threatening the entire globe. The United States would enjoy no sanctuary. This apocalyptic vision is no idiosyncratic view. The director of central intelligence, the Defense Department, and world experts generally place Kashmir at the peak of their nuclear worries. Both India and Pakistan are racing like thoroughbreds to bolster their nuclear arsenals and advanced delivery vehicles. Their defense budgets are climbing despite widespread misery amongst their populations. Neither country has initialed the Nuclear Non-Proliferation Treaty, the Comprehensive Test Ban Treaty, or indicated an inclination to ratify an impending Fissile Material/Cut-off Convention.

### Warming Bad – Water Shortages

#### Warming causes huge water shortages

**Pauchair 7** (R.K., Chair – IPCC, “Acceptance Speech for the Nobel Peace Prize Awarded to the [IPCC]”, 12-10, p. 5-6, http://www.ipcc.ch/)

Climate change is expected to exacerbate current stresses on water resources. On a regional scale, mountain snowpack, glaciers, and small ice caps play a crucial role in fresh water availability. Widespread mass losses from glaciers and reductions in snow cover over recent decades are projected to accelerate throughout the 21st century, reducing water availability, hydropower potential, and the changing seasonality of flows in regions supplied by meltwater from major mountain ranges (e.g. Hindu-Kush, Himalaya, Andes), where more than one-sixth of the world’s population currently lives. There is also high confidence that many semi-arid areas (e.g. the Mediterranean Basin, western United States, southern Africa, and northeastern Brazil) will suffer a decrease in water resources due to climate change. In Africa by 2020, between 75 and 250 million people are projected to be exposed to increased water stress due to climate change.

#### Water scarcity leads to lash outs and conflict

**Feltz**, 10/4/**2010** (Aude, Blue Gold, Michigan Peace Team, p. http://michiganpeaceteam.wordpress.com/2010/10/05/blue-gold-world-water-wars/)

The more we wait, the more world water shortage increases, and the more likely we are to reach a global water crisis. Indeed, serious conflict about water has already taken place. The most famous conflict concerns Owens Valley, California. In the 1920’s, William Mulholland, who was the head of Los Angeles Department of Water and Power, ordered the building of the Los Angeles Aqueduct in order to take water from the Owens Valley and bring it to Los Angeles. Farmers in the Valley were put out of business and counterattacked in violent rebellions, trying to sabotage the aqueduct. Another example is the fight over the Kaveri River in India, which was one of the most bloody water wars. Though the conflict’s purpose was water, it was presented as a religious conflict.  Yet another well known water conflict took place in Bolivia, in the city of Cochabamba. There the World Bank refused to grant a loan to finance the investment program of a local water co-op, so a few years later, in 2000, the city was obliged to sell its water to the corporation Bechtel.  Even rain water was privatized, so people were prohibited from gathering rain water.  The folk, having no money to buy water, rose up, and in reaction the government sent the army to protect Bechtel’s rights.  After violent showdowns, the government finally defended its people and countered the World Bank’s decision. **Future water wars are going to take place**. There seems to be no doubt about it, because water is **essential to life**.  This outcome seems to be inescapable, and that is why new maps, like the Potential Water Supply Crises by 2025 map, are being made. The aim for governments today is to identify areas where existing supplies are not adequate to meet water demands for people, farms and the environment. Countries like Brazil, Russia, Canada, the water rich area of the world, are understanding they need to secure theirs sources of water.  For these countries, water will be their military and economic security, so like oil today, water is being **protected by a military defense**.  And poor water countries, like the United States, are trying to secure those areas for themselves.  The United States, for example, tried to set up a military base in Paraguay, near the Brazilian’s Guarini Aquifer, which is the world greatest aquifer. They first tied to convince Brazil to give them access to the aquifer.  But when it comes to water, and that we will lack of it, **there might be no doubt that force will be used**.  There is no question that this area will become the “Middle East” for water.

#### Nuclear war

**Weiner**, **1990** (Jonathan – prof at Princeton, The Next 100 Years, p. 270)

If we do not destroy ourselves with the A-bomb and the H-bomb, then we may destroy ourselves with the C-bomb, the Change Bomb. And in a world as interlinked as ours, one explosion may lead to the other. Already in the Middle East, tram North Africa to the Persian Gulf and from the Nile to the Euphrates, tensions over dwindling water supplies and rising populations are reaching what many experts describe as a **flashpoint.** A climate shift in that single battle-scarred nexus might trigger international tensions that will **unleash some at the 60.000 nuclear warheads** the world has stockpiled since Trinity.

### Warming Bad – AT: No Warming

#### Scientific consensus proves warming is real

**Oreskes 4** (Naomi, Professor of History and Science Studies – University of California San Diego, “The Scientific Consensus on Climate Change”, Science Magazine, 12-3, <http://www.sciencemag.org/cgi/content/full/306/5702/1686>)

Policy-makers and the media, particularly in the United States, frequently assert that climate science is highly uncertain. Some have used this as an argument against adopting strong measures to reduce greenhouse gas emissions. For example, while discussing a major U.S. Environmental Protection Agency report on the risks of climate change, then-EPA administrator Christine Whitman argued, "As [the report] went through review, there was less consensus on the science and conclusions on climate change" ([1](http://www.sciencemag.org/cgi/content/full/306/5702/1686#ref1)). Some corporations whose revenues might be adversely affected by controls on carbon dioxide emissions have also alleged major uncertainties in the science ([2](http://www.sciencemag.org/cgi/content/full/306/5702/1686#ref2)). Such statements suggest that there might be substantive disagreement in the scientific community about the reality of anthropogenic climate change. This is not the case. The scientific consensus is clearly expressed in the reports of the Intergovernmental Panel on Climate Change (IPCC). Created in 1988 by the World Meteorological Organization and the United Nations Environmental Programme, IPCC's purpose is to evaluate the state of climate science as a basis for informed policy action, primarily on the basis of peer-reviewed and published scientific literature ([3](http://www.sciencemag.org/cgi/content/full/306/5702/1686#ref3)). In its most recent assessment, IPCC states unequivocally that the consensus of scientific opinion is that Earth's climate is being affected by human activities: "Human activities ... are modifying the concentration of atmospheric constituents ... that absorb or scatter radiant energy. ... [M]ost of the observed warming over the last 50 years is likely to have been due to the increase in greenhouse gas concentrations" [p. 21 in ([4](http://www.sciencemag.org/cgi/content/full/306/5702/1686#ref4))].IPCC is not alone in its conclusions. In recent years, all major scientific bodies in the United States whose members' expertise bears directly on the matter have issued similar statements. For example, the National Academy of Sciences report, Climate Change Science: An Analysis of Some Key Questions, begins: "Greenhouse gases are accumulating in Earth's atmosphere as a result of human activities, causing surface air temperatures and subsurface ocean temperatures to rise" [p. 1 in ([5](http://www.sciencemag.org/cgi/content/full/306/5702/1686#ref5))]. The report explicitly asks whether the IPCC assessment is a fair summary of professional scientific thinking, and answers yes: "The IPCC's conclusion that most of the observed warming of the last 50 years is likely to have been due to the increase in greenhouse gas concentrations accurately reflects the current thinking of the scientific community on this issue" [p. 3 in ([5](http://www.sciencemag.org/cgi/content/full/306/5702/1686#ref5))]. Others agree. The American Meteorological Society ([6](http://www.sciencemag.org/cgi/content/full/306/5702/1686#ref6)), the American Geophysical Union ([7](http://www.sciencemag.org/cgi/content/full/306/5702/1686#ref7)), and the American Association for the Advancement of Science (AAAS) all have issued statements in recent years concluding that the evidence for human modification of climate is compelling ([8](http://www.sciencemag.org/cgi/content/full/306/5702/1686#ref8)). The drafting of such reports and statements involves many opportunities for comment, criticism, and revision, and it is not likely that they would diverge greatly from the opinions of the societies' members. Nevertheless, they might downplay legitimate dissenting opinions. That hypothesis was tested by analyzing 928 abstracts, published in refereed scientific journals between 1993 and 2003, and listed in the ISI database with the keywords "climate change" ([9](http://www.sciencemag.org/cgi/content/full/306/5702/1686#ref9)). The 928 papers were divided into six categories: explicit endorsement of the consensus position, evaluation of impacts, mitigation proposals, methods, paleoclimate analysis, and rejection of the consensus position. Of all the papers, 75% fell into the first three categories, either explicitly or implicitly accepting the consensus view; 25% dealt with methods or paleoclimate, taking no position on current anthropogenic climate change. Remarkably, none of the papers disagreed with the consensus position. Admittedly, authors evaluating impacts, developing methods, or studying paleoclimatic change might believe that current climate change is natural. However, none of these papers argued that point. This analysis shows that scientists publishing in the peer-reviewed literature agree with IPCC, the National Academy of Sciences, and the public statements of their professional societies. Politicians, economists, journalists, and others may have the impression of confusion, disagreement, or discord among climate scientists, but that impression is incorrect. The question of what to do about climate change is also still open. But there is a scientific consensus on the reality of anthropogenic climate change. Climate scientists have repeatedly tried to make this clear. It is time for the rest of us to listen.

#### -- Indicators prove:

#### A) Satellites

**Meglin and Dickinson 2** (Jin, Professor of Meteorology – University of Maryland and Robert E., Professor of Earth and Atmospheric Sciences – Georgia Tech, “New Observational Evidence For Global Warming From Satellite”, 5-23, http://climate.eas.gatech.edu/dickinson/publications/jin-grl2002-warming.pdf)

We have developed procedures for removing the effects of changing satellite orbits and cloud contamination from skin temperatures estimated from AVHRR channels 4 and 5, and so provide a first estimate of the trends of land surface skin temperature over the last two decades. The estimated land temperature increase is not only much greater than that for the atmosphere but also apparently somewhat larger than the estimates of surface air temperature increase from in situ measurement. Data from the AVHRR satellite indicate that the temperature of land surface has **warmed substantially** in most regions over the last two decades and globally at a rate of about 0.43 ± 0.2\_C per decade, consistent with the increase of global land air temperature but apparently somewhat larger. The data set providing the diurnal cycle of land temperature also gives a decrease in the diurnal range of 0.16 ± 0.05\_C per decade. The skin temperature climatology estimated from the data show considerable spatial and temporal structures. Some of these structures are known to be real as established by correlation with the SAT change [Jin et al., 1997], and some either result from changes in the land temperature difference or artifacts in the temperature estimates caused by volcanic aerosol, unknown physics, or retrieval uncertainties.

#### B) Aggregate data

**MSNBC 7** (News, “Experts Issue New Climate Warning”, 4-6,

http://www.heatisonline.org/contentserver/objecthandlers/index.cfm?id=6342&method=full)

An international global warming conference approved a report Friday warning of dire threats to the Earth and to mankind from increased hunger in Africa and Asia to the extinction of species unless the world adapts to climate change and halts its progress. Africa will be hardest hit, the report concluded. By 2020, up to 250 million people are likely to exposed to water shortages. In some countries, food production could fall by half, it said. Agreement came after an all-night session during which key sections were deleted from the draft and scientists angrily confronted government negotiators who they feared were watering down their findings. It has been a complex exercise, said Rajendra Pachauri, chairman of the Intergovernmental Panel on Climate Change. Several scientists objected to the editing of the final draft by government negotiators but in the end agreed to compromises. However, some scientists vowed never to take part in the process again. The climax of five days of negotiations was reached when the delegates removed parts of a key chart highlighting devastating effects of climate change that kick in with every rise of 1.8 degrees Fahrenheit, and in a tussle over the level of scientific reliability attached to key statements. There was little doubt about the science, which was **based on 29,000 sets of data**, much of it collected in the last five years. For the first time we are not just arm-waving with models, Martin Perry, who conducted the grueling negotiations, told reporters.

#### C) Historical records

**Kerr 7** (Richard, Senior Writer in Research News Staff – Science Magazine, “Climate Change: Scientists Tell Policymakers We’re All Warming the World”, Science, 2-9, p. 754-757)

They've said it before, but this time climate scientists are saying it with feeling: The world is warming; it's not all natural, it's us; and if nothing is done, it will get a whole lot worse The last time the Intergovernmental Panel on Climate Change (IPCC) assessed the state of the climate, in early 2001, it got a polite enough hearing. The world was warming, it said, and human activity was "likely" to be driving most of the warming. Back then, the committee specified a better-than-60% chance--not exactly a ringing endorsement. And how bad might things get? That depended on a 20-year-old guess about how sensitive the climate system might be to rising greenhouse gases. Given the uncertainties, the IPCC report's reception was on the tepid side. Six years of research later, the heightened confidence is obvious. The warming is "unequivocal." Humans are "very likely" (higher than 90% likelihood) behind the warming. And the climate system is "very unlikely" to be so insensitive as to render future warming inconsequential. This is the way it was supposed to work, according to glaciologist Richard Alley of Pennsylvania State University in State College, a lead author on this IPCC report. "The governments of the world said to scientists, 'Here's a few billion dollars--get this right,' " Alley says. "They took the money, and 17 years after the first IPCC report, they got it right. It's still science, not revealed truth, but the science has gotten better and better and better. We're putting CO2 in the air, and that's changing the climate." With such self-assurance, this IPCC report may really go somewhere, especially in the newly receptive United States (see sidebar, p. 756), where a small band of scientists has long contested IPCC reports. Coordinating lead author Gabriele Hegerl of Duke University in Durham, North Carolina, certainly hopes their report hits home this time. "I want societies to understand that this is a real problem, and it affects the life of my kids." Down to work Created by the World Meteorological Organization and the United Nations Environment Programme, the IPCC had the process down for its fourth assessment report. Forty governments nominated the 150 lead authors and 450 contributing authors of Climate Change 2007: The Physical Science Basis. There was no clique of senior insiders: 75% of nominated lead authors were new to that role, and one-third of authors got their final degree in the past 10 years. Authors had their draft chapters reviewed by all comers. More than 600 volunteered, submitting 30,000 comments. Authors responded to every comment, and reviewers certified each response. With their final draft of the science in hand, authors gathered in Paris, France, with 300 representatives of 113 nations for 4 days to hash out the wording of a scientist-written Summary for Policymakers. The fact of warming was perhaps the most straightforward item of business. For starters, the air is 0.74°C warmer than in 1906, up from a century's warming of 0.6°C in the last report. "Eleven of the last twelve years rank among the 12 warmest years in the [150-year-long] instrumental record," notes the summary (ipcc-wg1.ucar.edu). Warming ocean waters, shrinking mountain glaciers, and retreating snow cover strengthened the evidence. So the IPCC authors weren't impressed by the contrarian argument that the warming is just an "urban heat island effect" driven by increasing amounts of heat-absorbing concrete and asphalt. That effect is real, the report says, but it has "a negligible influence" on the global number. Likewise, new analyses have largely settled the hullabaloo over why thermometers at Earth's surface measured more warming than remote-sensing satellites had detected higher in the atmosphere (Science, 12 May 2006, p. 825). Studies by several groups have increased the satellite-determined warming, largely reconciling the difference. This confidently observed warming of the globe can't be anything but mostly human-induced, the IPCC finds. True, modeling studies have shown that natural forces in the climate system--such as calmer volcanoes and the sun's brightening--have in fact led to warming in the past, as skeptics point out. And the natural ups and downs of climate have at times warmed the globe. But all of these natural variations in combination have not warmed the world enough, fast enough, and for long enough in the right geographic patterns to produce the observed warming, the report finds. In model studies, nothing warms the world as observed except the addition of greenhouse gases in the actual amounts emitted. From studies of long-past climate, including the famous hockey-stick curve of the past millennium's temperature (Science, 4 August 2006, p. 603), the IPCC concludes that the recent warming is quite out of the ordinary. "Northern Hemisphere temperatures during the second half of the 20th century were very likely higher than during any other 50-year period in the last 500 years," the report concludes, "and likely the highest in at least the past 1300 years."

### Warming Bad – AT: Negative Feedbacks Check

#### Ice melting and ocean darkening accelerate warming

**Hanson 8** (James E., Head – NASA Goddard Institute for Space Studies and Adjunct Professor of Earth and Environmental Science – Columbia University, “Twenty Years Later: Tipping Points Near on Global Warming”, 6-23, http://www.columbia.edu/~jeh1/2008/TwentyYearsLater\_20080623.pdf)

Climate can reach points such that amplifying feedbacks spur large rapid changes. Arctic sea ice is a current example. Global warming initiated sea ice melt, exposing darker ocean that absorbs more sunlight, melting more ice. As a result, without any additional greenhouse gases, the Arctic soon will be ice-free in the summer. More ominous tipping points loom. West Antarctic and Greenland ice sheets are vulnerable to even small additional warming. These two-mile-thick behemoths respond slowly at first, but if disintegration gets well underway it will become unstoppable. Debate among scientists is only about how much sea level would rise by a given date. In my opinion, if emissions follow a business-as-usual scenario, sea level rise of at least two meters is likely this century. Hundreds of millions of people would become refugees. No stable shoreline would be reestablished in any time frame that humanity can conceive.

#### Warming collapses carbon sinks – creating positive feedbacks and rapid spikes

**Stern 7** (Nicholas, Head of the British Government Economic Service, Former Head Economist for the World Bank, I.G. Patel Chair – London School of Economics and Political Science, “The Economics of Climate Change: The Stern Review”, p. 11)

Weakening of Natural Land-Carbon Sinks: Initially, higher levels of carbon dioxide in the atmosphere will act as a fertiliser for plants, increasing forest growth and the amount of carbon absorbed by the land. A warmer climate will increasingly offset this effect through an increase in plant and soil respiration (increasing release of carbon from the land). Recent modelling suggests that net absorption may initially increase because of the carbon fertilisation effects (chapter 3). But, by the end of this century it will reduce significantly as a result of increased respiration and limits to plant growth (nutrient and water availability). 28 Weakening of Natural Ocean-Carbon Sinks: The amount of carbon dioxide absorbed by the oceans is likely to weaken in the future through a number of chemical, biological and physical changes. For example, chemical uptake processes may be exhausted, warming surface waters will reduce the rate of absorption and CO2 absorbing organisms are likely to be damaged by ocean acidification29. Most carbon cycle models agree that climate change will weaken the ocean sink, but suggest that this would be a smaller effect than the weakening of the land sink30. Release of Methane from Peat Deposits, Wetlands and Thawing Permafrost: Thawing permafrost and the warming and drying of wetland areas could release methane (and carbon dioxide) to the atmosphere in the future. Models suggest that up to 90% of the upper layer of permafrost will thaw by 2100.31 These regions contain a substantial store of carbon. One set of estimates suggests that wetlands store equivalent to around 1600 GtCO2e (where Gt is one billion tonnes) and permafrost soils store a further 1500 GtCO2e32. Together these stores comprise more than double the total cumulative emissions from fossil fuel burning so far. Recent measurements show a 10 – 15% increase in the area of thaw lakes in northern and western Siberia. In northern Siberia, methane emissions from thaw lakes are estimated to have increased by 60% since the mid 1970’s33. It remains unclear at what rate methane would be released in the future. Preliminary estimates indicate that, in total, methane emissions each year from thawing permafrost and wetlands could increase by around 4 – 10 GtCO2e, more than 50% of current methane emissions and equivalent to 10 – 25% of current man-made emissions.34 Release of Methane from Hydrate Stores: An immense quantity of methane (equivalent to tens of thousands of GtCO2, twice as much as in coal, oil and gas reserves) may also be trapped under the oceans in the form of gas hydrates. These exist in regions sufficiently cold and under enough high pressures to keep them stable. There is considerable uncertainty whether these deposits will be affected by climate change at all. However, if ocean warming penetrated deeply enough to destabilise even a small amount of this methane and release it to the atmosphere, it would lead to a rapid increase in warming.35 Estimates of the size of potential releases are scarce, but are of a similar scale to those from wetlands and permafrost.

### Warming Bad – AT: Not Anthropogenic

#### Multiple studies prove warming is anthropogenic – no other explanation is possible

**Scott 3** (Peter, Hadley Center for Climate Prediction and Research “Attribution of Temperature Changes to Anthropogenic and Natural Causes”, 7-16, http://www.geog.ox.ac.uk/~mnew/teaching/Online\_Articles/stott\_regional\_attribution\_GRL\_2003.pdf)

An increasing body of evidence indicates that global warming that has been observed over the course of the last century cannot be explained by natural externally forced or internal variability [Mitchell et al., 2001]. A number of recent studies [eg., Stott et al., 2001; Tett et al., 2002] have used optimal detection [Hasselmann, 1997], a form of linear regression [Allen and Tett, 1999], to estimate the contributions, with their uncertainties, of anthropogenic and natural forcings to recent temperature changes. Optimal detection studies consistently show that anthropogenic forcings were the dominant factor controlling global warming in the latter half of the 20th century, leading the IPCC to conclude in the Third Assessment Report that ‘‘most of the warming observed over the last 50 years is attributable to human activities’’. [3] Most detection studies investigating atmospheric temperature changes have considered global scale patterns of change. [Zwiers and Zhang, 2003] showed that the combined effects of greenhouse gases and sulfate aerosols may be detected on sub-global scales, and showed a detectable anthropogenic influence on warming in Eurasia and North America.

#### Thousands of studies prove warming is anthropogenic

**Rahmstorf 8** (Richard, Professor of Physics of the Oceans – Potsdam University, Global Warming: Looking Beyond Kyoto, Ed. Zedillo, p. 45-49)

It is time to address the final statement: most of the observed warming over the past fifty years is anthropogenic. A large number of studies exist that have taken different approaches to analyze this issue, which is generally called the "attribution problem." I do not discuss the exact share of the anthropogenic contribution (although this is an interesting question). By "most" I imply mean "more than 50 percent." The first and crucial piece of evidence is, of course, that the magnitude of the warming is what is expected from the anthropogenic perturbation of the radiation balance, so anthropogenic forcing is able to explain all of the temperature rise. As discussed here, the rise in greenhouse gases alone corresponds to 2.6 W/m2 of forcing. This by itself, after subtraction of the observed 0.6 W/m2 of ocean heat uptake, would cause 1.6°C of warming since preindustrial times for medium climate sensitivity (3°C). With a current "best guess"; aerosol forcing of 1 W/m2, the expected warming is 0.8°C. The point here is not that it is possible to obtain the 'exact observed number—this is fortuitous because the amount of aerosol forcing is still very uncertain—but that the expected magnitude is roughly right. There can be little doubt that the anthropogenic forcing is large enough to explain most of the warming. Depending on aerosol forcing and climate sensitivity, it could explain a large fraction of the warming, or all of it, or even more warming than has been observed (leaving room for natural processes to counteract some of the warming). The second important piece of evidence is clear: there is no viable alternative explanation. In the scientific literature, no serious alternative hypothesis has been proposed to explain the observed global warming. Other possible causes, such as solar activity, volcanic activity, cosmic rays, or orbital cycles, are well observed, but they do not show trends capable of explaining the observed warming. Since 1978, solar irradiance has been measured directly from satellites and shows the well-known eleven-year solar cycle, but no trend. There are various estimates of solar variability before this time, based on sunspot numbers, solar cycle length, the geomagnetic AA index, neutron monitor data, and, carbon-14 data. These indicate that solar activity probably increased somewhat up to 1940. While there is disagreement about the variation in previous centuries, different authors agree that solar activity did not significantly increase during the last sixty-five years. Therefore, this cannot explain the warming, and neither can any of the other factors mentioned. Models driven by natural factors only, leaving the anthropogenic forcing aside, show a cooling in the second half of the twentieth century (for an example, See figure 2-2, panel a, in chapter 2 of this volume). The trend in the sum of natural forcings is downward. The only way out would be either some as yet undiscovered unknown forcing or a warming trend that arises by chance from an unforced internal variability in the climate system. The latter cannot be completely ruled out, but has to be considered highly unlikely. No evidence in the observed record, proxy data, or current models suggest that such internal variability could cause a sustained trend of global warming of the observed magnitude. As discussed, twentieth century warming is unprecedented over the past 1,000 years (or even 2,000 years, as the few longer reconstructions available now suggest), which does not support the idea of large internal fluctuations. Also, those past variations correlate well with past forcing (solar variability, volcanic activity) and thus appear to be largely forced rather than due to unforced internal variability.48 And indeed, it would be difficult for a large and sustained unforced variability to satisfy the fundamental physical law of energy conservation. Natural internal variability generally shifts heat around different parts of the climate system-for example, the large El Nino event of 1998, which warmed, the atmosphere by releasing heat stored in the ocean. This mechanism implies that the ocean heat content drops as the atmosphere warms. For past decades, as discussed, we observed the atmosphere warming and the ocean heat content increasing, which rules out heat release from the ocean as a cause of surface warming. The heat content of the whole climate system is increasing, and there is no plausible source of this heat other than the heat trapped by greenhouse gases. A completely different approach to attribution is to analyze the spatial patterns of climate change. This is done in so-called fingerprint studies, which associate particular patterns or "fingerprints" with different forcings. It is plausible that the pattern of a solar-forced climate change differs from the pattern of a change caused by greenhouse gases. For example, a characteristic of greenhouse gases is that heat is trapped closer to the Earth's surface and that, unlike solar variability, greenhouse gases tend to warm more in winter, and at night. Such studies have used different data sets and have been performed by different groups of researchers with different statistical methods. They consistently conclude that the observed spatial pattern of warming can only be explained by greenhouse gases.49 Overall, it has to be considered, highly likely that the observed warming is indeed predominantly due to the human-caused increase in greenhouse gases. This paper discussed the evidence for the anthropogenic increase in atmospheric CO2 concentration and the effect of CO2 on climate, finding that this anthropogenic increase is proven beyond reasonable doubt and that a mass of evidence points to a CO2 effect on climate of 3C ± 1.59C global-warming for a doubling of concentration. (This is, the classic IPCC range; my personal assessment is that, in-the light of new studies since the IPCC Third Assessment Report, the uncertainty range can now be narrowed somewhat to 3°C ± 1.0C) This is based on consistent results from theory, models, and data analysis, and, even in the absence-of any computer models, the same result would still hold based on physics and on data from climate history alone. Considering the plethora of consistent evidence, the chance that these conclusions are wrong has to be considered minute. If the preceding is accepted, then it follows logically and incontrovertibly that a further increase in CO2 concentration will lead to further warming. The magnitude of our emissions depends on human behavior, but the climatic response to various emissions scenarios can be computed from the information presented here. The result is the famous range of future global temperature scenarios shown in figure 3-6.50 Two additional steps are involved in these computations: the consideration of anthropogenic forcings other than CO2 (for example, other greenhouse gases and aerosols) and the computation of concentrations from the emissions. Other gases are not discussed here, although they are important to get quantitatively accurate results. CO2 is the largest and most important forcing. Concerning concentrations, the scenarios shown basically assume that ocean and biosphere take up a similar share of our emitted CO2 as in the past. This could turn out to be an optimistic assumption; some models indicate the possibility of a positive feedback, with the biosphere turning into a carbon source rather than a sink under growing climatic stress. It is clear that even in the more optimistic of the shown (non-mitigation) scenarios, global temperature would rise by 2-3°C above its preindustrial level by the end of this century. Even for a paleoclimatologist like myself, this is an extraordinarily high temperature, which is very likely unprecedented in at least the past 100,000 years. As far as the data show, we would have to go back about 3 million years, to the Pliocene, for comparable temperatures. The rate of this warming (which is important for the ability of ecosystems to cope) is also highly unusual and unprecedented probably for an even longer time. The last major global warming trend occurred when the last great Ice Age ended between 15,000 and 10,000 years ago: this was a warming of about 5°C over 5,000 years, that is, a rate of only 0.1 °C per century.52 The expected magnitude and rate of planetary warming is highly likely to come with major risk and impacts in terms of sea level rise (Pliocene sea level was 25-35 meters higher than now due to smaller Greenland and Antarctic ice sheets), extreme events (for example, hurricane activity is expected to increase in a warmer climate), and ecosystem loss. The second part of this paper examined the evidence for the current warming of the planet and discussed what is known about its causes. This part showed that global warming is already a measured and-well-established fact, not a theory. Many different lines of evidence consistently show that most of the observed warming of the past fifty years was caused by human activity. Above all, this warming is exactly what would be expected given the anthropogenic rise in greenhouse gases, and no viable alternative explanation for this warming has been proposed in the scientific literature. Taken together, the very strong evidence accumulated from thousands of independent studies, has over the past decades convinced **virtually every climatologist** around the world (many of whom were initially quite skeptical, including myself) that anthropogenic global warming is a reality with which we need to deal.

### CO2 Bad – Amazon

#### CO2 destroys the Amazon

**Adams 2007** (Jonathan, Assistant Professor in Ecology – Rutgers University, and Ning Zeng, Professor of Metereology – University of Maryland and Affiliate – Earth System Science Interdisciplinary Center, Vegetation-Climate Interaction: How Vegetation Makes the Global Environment, p. 215)

However, it is important to bear in mind that the plants themselves are generally bigger when they are C02-fertilized, and the extra amount lost to hungry insects in these experiments actually works out to be less as a percentage of the total leaf area. Also, insects which have to eat more leaf material to extract enough protein are generally placed in a difficult situation: it takes a lot of work for the insect to digest the extra material, and the insect may also have to take in extra amounts of poisons the host plant produces in the process of consuming more leaf. The insect may also have to spend more time feeding out on the leaf exposed to enemies when it cannot get enough protein. In fact, the evidence is that overall with C02 fertilization the advantage is tipped in favor of the plant, against the insect. It seems that insects on C02-fertilized plants not only consume a smaller proportion of leaf tissue, they grow more slowly and die more often. Most species in the world are herbivorous insects, and it is rather frightening to consider what effects this sort of change might have on insect biodiversity in the tropics and elsewhere. It is quite possible that a large change in nutrient content will **push many species** over the edge **into extinction**. It is widely considered by ecologists that a large part of the reason so many species of tropical trees can coexist in the tropical rainforests is that selective insect herbivores prevent each tree species from becoming too abundant. If we start to see these specialized herbivores dropping out of existence because of a direct C02 effect, **many tropical trees may go extinct** because the most competitive species among them are no longer so closely density-limited and can now push the others out.

#### Loss of the Amazon results in extinction --- it is the lungs of the Earth

O’Neal 97 (Martin, “Rain Forest Depletion,” 5-5, http://www.northern.wvnet.edu/~tdanford/bio1/RAINFO.htm)

There are some really amazing facts about the Amazon rain forest. The Amazon alone covers 54% of all the world’s rain forests, thus making it literally the lungs of the Earth. We can say this because trees produce oxygen while they use carbon dioxide to maintain their respiration. Rain forests cover about 7% of the Earth’s surface, but host about 50-90% of the plant and animal population of the entire world. The Amazon River has more species of fish than the entire Atlantic Ocean does. In less than 25 acres of rain forest there are more species of trees than the entire continent of North America. A tree found in Peru was found to be the host to 43 different species of ants. There are more species of birds on a Peru reserve than the entire United States has. A fact that is very highly regarded about the Amazon rain forest is that of the 3000 species of plants that have been discovered there, 70% of these plants have anti-cancerous properties. Also, 25% of these plants are now used to combat cancer. So as humankind continues to harvest the Amazon rain forest which covers 1.2 million acres and 9 countries, they should also try to consider the devastating effects that it is having on our race along with all the biological effects that it also carries. Although 1.2 million acres seems like a very large number, in the past four decades that number was reduced in half to the current figure, so we see that this can not keep happening with out some type of governing on what is occurring. If it does we may become an endangered species.

### CO2 Bad – Oceans Impact

#### CO2 turns oceans to acid, killing marine ecosystems

**Stern 2007** (Nicholas, Head of the British Government Economic Service, Former Head Economist for the World Bank, I.G. Patel Chair – London School of Economics and Political Science, “The Economics of Climate Change: The Stern Review”, p. 72)

Ocean acidification, a direct result of rising carbon dioxide levels, will have major effects on marine ecosystems, with possible adverse consequences on fish stocks. For fisheries, information on the likely impacts of climate change is very limited – a major gap in knowledge considering that about one billion people worldwide (one-sixth of the world’s population) rely on fish as their primary source of animal protein. While higher ocean temperatures may increase growth rates of some fish, reduced nutrient supplies due to warming may limit growth. Ocean acidification is likely to be particularly damaging. The oceans have become more acidic in the past 200 years, because of chemical changes caused by increasing amounts of carbon dioxide dissolving in seawater.44 If global emissions continue to rise on current trends, ocean acidity is likely to increase further, with pH declining by an additional 0.15 units if carbon dioxide levels double (to 560 ppm) relative to pre-industrial and an additional 0.3 units if carbon dioxide levels treble (to 840 ppm).45 Changes on this scale have not been experienced for hundreds of thousands of years and are occurring at an extremely rapid rate. Increasing ocean acidity makes it harder for many ocean creatures to form shells and skeletons from calcium carbonate. These chemical changes have the potential to disrupt marine ecosystems irreversibly - at the very least halting the growth of corals, which provide important nursery grounds for commercial fish, and damaging molluscs and certain types of plankton at the base of the food chain. Plankton and marine snails are critical to sustaining species such as salmon, mackerel and baleen whales, and such changes are expected to have serious but as-yet-unquantified wider impacts.

#### Extinction --- precautionary principle is a side constraint

**Craig**, Winter **2003** (Robin – associate professor of law at the Indiana University School of Law, 34 McGeorge L. Rev. 155, p. lexis)

Biodiversity and ecosystem function arguments for conserving marine ecosystems also exist, just as they do for terrestrial ecosystems, but these arguments have thus far rarely been raised in political debates. For example, besides significant tourism values - the most economically valuable ecosystem service coral reefs provide, worldwide - coral reefs protect against storms and dampen other environmental fluctuations, services worth more than ten times the reefs’ value for food production. Waste treatment is another significant, non-extractive ecosystem function that intact coral reef ecosystems provide. More generally, “ocean ecosystems play a major role in the global geochemical cycling of all the elements that represent the basic building blocks **of living organisms**, carbon, nitrogen, oxygen, phosphorus, and sulfur, as well as other less abundant but necessary elements.” In a very real and direct sense, therefore, human degradation of marine ecosystems **impairs the planet’s ability to support life**. Maintaining biodiversity is often critical to maintaining the functions of marine ecosystems. Current evidence shows that, in general, an ecosystem’s ability to keep functioning in the face of disturbance is **strongly dependent on its biodiversity**, “indicating that more diverse ecosystems are more stable.” Coral reef ecosystems are particularly dependent on their biodiversity. Most ecologists agree that the complexity of interactions and degree of interrelatedness among component species is higher on coral reefs than in any other marine environment. This implies that the ecosystem functioning that produces the most highly valued components is also complex and that many otherwise insignificant species have strong effects on sustaining the rest of the reef system. Thus, maintaining and restoring the biodiversity of marine ecosystems is critical to maintaining and restoring the ecosystem services that they provide. Non-use biodiversity values for marine ecosystems have been calculated in the wake of marine disasters, like the Exxon Valdez oil spill in Alaska. Similar calculations could derive preservation values for marine wilderness. However, economic value, or economic value equivalents, should not be “the sole or even primary justification for conservation of ocean ecosystems. Ethical arguments also have considerable force and merit.” At the forefront of such arguments should be a recognition of **how little we know about the sea** - and about the actual effect of human activities on marine ecosystems. The United States has traditionally failed to protect marine ecosystems because it was difficult to detect anthropogenic harm to the oceans, but we now know that such harm is occurring - even though we are not completely sure about causation or **about how to fix every problem**. Ecosystems like the NWHI coral reef ecosystem should inspire lawmakers and policymakers to admit that most of the time we really do not know what we are doing to the sea and hence should be preserving marine wilderness whenever we can - especially when the United States has within its territory relatively pristine marine ecosystems that may be unique in the world. We may not know much about the sea, but we do know this much: **if we kill the ocean we kill ourselves**, and we will take most of the biosphere with us. The Black Sea is almost dead, its once-complex and productive ecosystem almost entirely replaced by a monoculture of comb jellies, “starving out fish and dolphins, emptying fishermen’s nets, and converting the web of life into brainless, wraith-like blobs of jelly.” More importantly, the Black Sea is not necessarily unique. The Black Sea is a microcosm of what is happening to the ocean systems at large. The stresses piled up: overfishing, oil spills, industrial discharges, nutrient pollution, wetlands destruction, the introduction of an alien species. The sea weakened, slowly at first, then collapsed with shocking suddenness. The lessons of this tragedy should not be lost to the rest of us, because much of what happened here is being repeated all over the world. The ecological stresses imposed on the Black Sea were not unique to communism. Nor, sadly, was the failure of governments to respond to the emerging crisis. Oxygen-starved “dead zones” appear with increasing frequency off the coasts of major cities and major rivers, forcing marine animals to flee and killing all that cannot. Ethics as well as enlightened self-interest thus suggest that the United States should protect fully-functioning marine ecosystems wherever possible - even if a few fishers go out of business as a result.

### Transportation Emissions Key

#### Transportation emissions are the primary contributor to global warming

**U**nion of **C**oncerned **S**cientists, 5/3/**2012** (Car Emissions and Global Warming, p. http://www.ucsusa.org/clean\_vehicles/why-clean-cars/global-warming/)

We are driving up the planet’s temperature. Transportation is one of the primary contributors to global warming, generating more than one-third of all U.S. carbon dioxide emissions and 30 percent of America’s total global warming emissions. If we are going to effectively address global warming, we must reduce the emissions our vehicles produce. The Earth is warming and human activity is the primary cause. Climate disruptions caused by global warming put our food and water supply at risk, endanger our health, jeopardize our national security, and threaten other basic human needs. Some impacts—such as record high temperatures, melting glaciers, and severe flooding and droughts—are already increasingly common. More than 60 percent of U.S. transportation emissions come from cars and light trucks. Passenger cars and light trucks **represent the lion’s share of U.S. transportation emissions** and collectively produce more than one-fifth of the nation’s total global warming pollution. The remaining transportation emissions come from medium and heavy-duty vehicles (primarily freight trucks and buses), plus aircraft, shipping, rail, military, and other uses.

### AT: Chester and Horvath Study (Berkeley’s Institute for Transportation Studies)

#### Disregard the Berkeley ITS Study --- it suffers from miscalculations and flawed number conversions

**Tillier**, 12/29/**2010** (Clem – runs Caltrain HSR Compatibility Blog, HSR Emissions Paper Was Wrong, California High Speed Rail Blog, p. http://www.cahsrblog.com/2010/12/hsr-emissions-paper-was-wrong/)

In late 2009, Mikhail Chester and Arpad Horvath of Berkeley’s Institute for Transportation Studies published a paper entitled “Life-cycle assessment of high-speed rail: the case of California” in the academic journal Environmental Research Letters. This paper received some attention from the media and the blogosphere because it appeared to debunk a popular notion among high-speed rail supporters: that HSR is one of the greenest forms of intercity transportation. The key finding of the study was that HSR didn’t stack up against cars, planes or regular trains unless the trains were fairly full, as shown in the figure below. (See paper for full caption and explanation) Leaving aside for the moment the unprecedented notion of high-speed trains being operated at 10% seat occupancy–in reality, service frequency would be dropped to achieve higher loads–the numbers used in the study show that energy consumption, greenhouse gas emissions, and sulfur dioxide emissions are dominated by emissions from “Vehicle Active Operation,” i.e. electrical power consumed for the purpose of actually running trains. Unfortunately, that is where the study falls apart. Berkeley’s numbers are undone by a simple unit conversion error committed by a CHSRA consultant. Conversions between metric and imperial units are prone to errors and misunderstandings, most famously in the case of NASA’s $300 million Mars Climate Orbiter mission, which was inadvertently crashed into Mars because of an **overlooked conversion between pounds and Newtons**. In the case of the high-speed rail study, the CHSRA consultant’s unit conversion error leads to an overestimate of HSR energy consumption by a **factor of nearly four**–not just in the Berkeley study, but also in the CHSRA’s program level environmental reports. The energy consumption figure cited in the Berkeley study and its supplementary data is 170 kilowatt-hours per vehicle kilometer traveled, or kWh/VKT, a measure of how much energy a high-speed train consumes on average when traveling one kilometer. This number is correctly converted by Berkeley from a figure of 924,384 BTU/VMT referenced in the energy chapter of the 2008 CHSRA program-level EIR. That chapter in turn references a peer-review study performed for CHSRA by the German firm DE-Consult in 2000, which evaluated the energy consumption of a hypothetical 16-car trainset with a seating capacity of 1200 and a design speed of 385 km/h (240 mph) and an operating speed of 350 km/h (220 mph), essentially a souped-up German ICE3. The DE-Consult study (unavailable online) contains detailed performance simulations for the proposed California system that give the average energy consumption of such a train as 74.2 kWh/VMT, or 46 kWh/VKT (see copy of Annex 4-11). And therein lies the error: CHSRA’s consultant botched the conversion from kilowatt-hours to British Thermal Units, feeding Berkeley a figure of 170 kWh/VKT instead of 46 kWh/VKT. While the conversion error is no fault of the Berkeley researchers, the least they could have done is cross-checked the number with other papers in their own field of transportation research, such as those referenced here, showing HSR values in the 20 – 30 kWh/VKT range. (DE-Consult’s California figure is higher because the assumed train is very long, with 1200 seats, and operates at higher speeds where aerodynamic drag increases rapidly.) An elementary back-of-the-envelope calculation of the physical quantities involved, such as a train’s maximum power rating, its travel distance, and its timetable, would also have indicated that 170 kWh/VKT was **implausibly high**. Using the correct number, the study’s conclusions would be significantly altered, as shown in the modified figure below, where the contribution from Vehicle Active Operation has been proportionally scaled down to the correct DE-Consult number. The study’s comparison of HSR with other modes (especially cars and aircraft) would show California’s HSR **pulling ahead with a significant life-cycle advantage in energy use and greenhouse gas emissions**, and with a far lower sensitivity to ridership factors. In view of the enormous errors induced by a single incorrect parameter, it is incumbent on Chester and Horvath to acknowledge this major flaw and to publish a correction in Environmental Research Letters.

### AT: Construction Costs

#### Development of HSR offsets the environmental damage of construction

**Jaffe**. 11/15/**2011** (Eric – contributing writer to The Atlantic Cities, How Green is High-Speed Rail?, The Atlantic Cities, p. http://www.theatlanticcities.com/commute/2011/11/how-green-high-speed-rail/492/)

Still Acela is not true high-speed rail, and global passengers figures suggest that legitimate high-speed systems have no trouble exceeding a 10 million passenger threshold. While California officials anticipate only upwards of 11 million riders by 2025, the annual ridership figure by 2040 will range between around 30 and 44 million passengers [PDF], after the completion of Phase 1, which connects Los Angeles and San Francisco. According to the rail authority's new business plan, those figures are entirely reasonable given the populations along the California line [PDF]: As shown, the Spanish HSR system serves cities with a combined population of 7.9 million people and has annual ridership of 10 million; the French system serves a combined 15.1 million people and generates 31 million annual riders. California’s system will serve a population base projected to be over 49 million in Full Phase 1. In short, it seems entirely reasonable to conclude that the California line will eventually offset the environmental damage caused by its construction, and then some. Still it's fair to wonder whether or not the environmental benefits of high-speed rail are worth its considerable cost. In a 2009 post for the New York Times Economix blog, Ed Glaeser concluded that while these benefits exist, they are "quite small relative to the cost of the system." Certainly California will help its case by keeping its project as cost-effective as possible. But it's important to keep in mind that high-speed rail systems aren't constructed in a vacuum. In reaching their 10 million-rider figure, Westina and Kagesona don't appear to consider the environmental impact that would occur if California ditches its rail plan and instead constructs enough roads and railways to accommodate its current culture of air and highway travel. **That impact would no doubt be considerable**: at its current pace, the state's department of transportation will spend around $286 billion, largely on road projects, over the same period it plans to build the high-speed rail line.

### AT: Alternative Energy Solves

#### Alternative energy production will not come fast enough and will emit more gases.

**Klare**, 6/6/**2011** (Michael - professor of peace and world security studies at Hampshire College, How the global energy crisis will change our lives, Salon, p. http://www.salon.com/news/politics/war\_room/2011/06/06/global\_energy\_crisis\_worsens)

The price of coal, too, has soared in recent months, thanks to mounting worldwide demand as supplies of energy from nuclear power and hydroelectricity have contracted. Many countries have **launched significant efforts** to spur the development of renewable energy, but these are **not advancing fast enough** or on a large enough scale to replace older technologies quickly. The only bright spot, experts say, is the growing extraction of natural gas from shale rock in the United States through the use of hydraulic fracturing ("hydro-fracking"). Proponents of shale gas claim it can provide a large share of America's energy needs in the years ahead, while actually reducing harm to the environment when compared to coal and oil (as gas emits less carbon dioxide per unit of energy released); however, an expanding chorus of opponents are warning of the threat to municipal water supplies posed by the use of toxic chemicals in the fracking process. These warnings have proven convincing enough to lead lawmakers in a growing number of states to begin placing restrictions on the practice, throwing into doubt the future contribution of shale gas to the nation's energy supply. Also, on May 12th, the French National Assembly (the powerful lower house of parliament) voted 287 to 146 to ban hydro-fracking in France, becoming the first nation to do so. The environmental problems of shale gas are hardly unique. The fact is that all of the strategies now being considered to extend the life-spans of oil, coal, and natural gas involve severe economic and environmental risks and costs -- as, of course, does the very use of fossil fuels of any sort at a moment when the first IEA numbers for 2010 indicate that it was an unexpectedly record-breaking year for humanity when it came to dumping greenhouse gases into the atmosphere. With the easily accessible mammoth oil fields of Texas, Venezuela, and the Middle East either used up or soon to be significantly depleted, the future of oil rests on third-rate stuff like tar sands, shale oil, and extra-heavy crude that require a lot of energy to extract, processes that emit added greenhouse gases, and as with those tar sands, tend to play havoc with the environment. Shale gas is typical. Though plentiful, it can only be pried loose from underground shale formations through the use of explosives and highly pressurized water mixed with toxic chemicals. In addition, to obtain the necessary quantities of shale oil, many tens of thousands of wells will have to be sunk across the American landscape, any of one of which could prove to be an environmental disaster. Likewise, the future of coal will rest on increasingly invasive and hazardous techniques, such as the explosive removal of mountaintops and the dispersal of excess rock and toxic wastes in the valleys below. Any increase in the use of coal will also enhance climate change, since coal emits more carbon dioxide than do oil and natural gas. Here's the bottom line: Any expectations that ever-increasing supplies of energy will meet demand in the coming years are destined to be **disappointed**. Instead, recurring shortages, rising prices, and mounting discontent are likely to be the thematic drumbeat of the globe's energy future.

## HSR Good – Extra

### HSR Good – Air Pollution Impact

#### High speed rail massively cuts air pollution

**Zaidi 7** (Kamaal R., JD – University of Tulsa, “High Speed Rail Transit: Developing the Case for Alternative Transportation Schemes in the Context of Innovative and Sustainable Global Transportation Law and Policy”, Temple Journal of Science, Technology & Environmental Law, Fall, 26 Temp. J. Sci. Tech. & Envtl. L. 301, Lexis)

#### i. The Pollution Effects of Conventional Transportation In the transportation sector, with every new technology comes the question of how that technology will impact the environment. Given that conventional modes of transportation, which use fossil-fuels, contribute to rising levels of air, noise, and land pollution, alternative forms of energy such as wind energy and solar energy are gaining popularity. This rising popularity of "greener" technologies such as high-speed rail transit includes some form of environmental impact assessment to determine whether or not such technology is applicable. Currently, there are several environmental impacts by railway transport, including air pollution (e.g. idling of stationary vehicles during traffic), noise pollution, and water pollution. [49](http://www.lexis.com/research/retrieve?cc=&pushme=1&tmpFBSel=all&totaldocs=&taggedDocs=&toggleValue=&numDocsChked=0&prefFBSel=0&delformat=XCITE&fpDocs=&fpNodeId=&fpCiteReq=&brand=&_m=5970e0f73f0848f57e708e2813ba3085&docnum=1&_fmtstr=FULL&_startdoc=1&wchp=dGLbVtb-zSkAl&_md5=80fa0d224ef109c72f683108b06af6a5&focBudTerms=high+speed+rail+w%2F35+air+pollution&focBudSel=all" \l "n49" \t "_self) Modern efforts to combat noise pollution have focused on noise abatement. High-speed rail transit has the distinct advantage of being more environmentally friendly in terms of requiring less fuel than conventional forms of travel like air or road travel. [50](http://www.lexis.com/research/retrieve?cc=&pushme=1&tmpFBSel=all&totaldocs=&taggedDocs=&toggleValue=&numDocsChked=0&prefFBSel=0&delformat=XCITE&fpDocs=&fpNodeId=&fpCiteReq=&brand=&_m=5970e0f73f0848f57e708e2813ba3085&docnum=1&_fmtstr=FULL&_startdoc=1&wchp=dGLbVtb-zSkAl&_md5=80fa0d224ef109c72f683108b06af6a5&focBudTerms=high+speed+rail+w%2F35+air+pollution&focBudSel=all" \l "n50" \t "_self) For example, while idling cars contribute to higher levels of air pollution during traffic congestion, high-speed rail transit operate mainly on electrification and signaling systems that produce very little emissions. Moreover, traveling vehicles produce excessive noise for surrounding communities, while high-speed trains run on tracks specially manufactured for noise abatement. For these reasons, several nations are actively promoting high-speed transit to protect the environment, including wildlife and rural communities. Perhaps the most significant environmental benefits associated with high- [\*311] speed rail transit can be summarized as follows: - Decreased energy consumption; - Reduced air pollution; - Using less land to expand highways and airports; and - Fewer impacts on sensitive habits and water resources such as floodplains, streams, and wetlands [51](http://www.lexis.com/research/retrieve?cc=&pushme=1&tmpFBSel=all&totaldocs=&taggedDocs=&toggleValue=&numDocsChked=0&prefFBSel=0&delformat=XCITE&fpDocs=&fpNodeId=&fpCiteReq=&brand=&_m=5970e0f73f0848f57e708e2813ba3085&docnum=1&_fmtstr=FULL&_startdoc=1&wchp=dGLbVtb-zSkAl&_md5=80fa0d224ef109c72f683108b06af6a5&focBudTerms=high+speed+rail+w%2F35+air+pollution&focBudSel=all" \l "n51" \t "_self)

#### Air pollution causes extinction

Driesen 3 (David, Associate Professor – Syracuse Univeristy Law, 10 Buff. Envt'l. L.J. 25, Fall/Spring, Lexis)

Air pollution can make life unsustainable by harming the ecosystem upon which all life depends and harming the health of both future and present generations. The Rio Declaration articulates six key principles that are relevant to air pollution. These principles can also be understood as goals, because they describe a state of affairs that is worth achieving. Agenda 21, in turn, states a program of action for realizing those goals. Between them, they aid understanding of sustainable development's meaning for air quality. The first principle is that "human beings. . . are entitled to a healthy and productive life in harmony with nature", because they are "at the center of concerns for sustainable development." 3 While the Rio Declaration refers to human health, its reference to life "in harmony with nature" also reflects a concern about the natural environment. 4 Since air pollution damages both human health and the environment, air quality implicates both of these concerns. 5

### HSR Good – Ozone Impact

#### High speed rail stops ozone depletion

**Hansen 3** (David, Not the Terrible Band, “Don’t Let Train Vow Hit Buffers”, Evening News (Edinburgh), 3-17, Lexis)

AS well as short-term improvements, airport rail links provide the possibility of replacing some air journeys by trains. The Government has yet to escape from a destructive "predict and provide" approach to airport building, which will simply lead to hyper-mobility as it has done on the roads. Short distance air travel is particularly damaging to the ozone layer, causing climate change out of all proportion to the length of journey.

#### Ozone depletion causes extinction

**Greenpeace 1995** (Full of Holes: Montreal Protocol and the Continuing Destruction of the Ozone Layer -- A Greenpeace Report with contributions from Ozone Action, http://archive.greenpeace.org/ozone/holes/holebg.html)

When chemists Sherwood Rowland and Mario Molina first postulated a link between chlorofluorocarbons and ozone layer depletion in 1974, the news was greeted with scepticism, but taken seriously nonetheless. The **vast majority of credible scientists** have since confirmed this hypothesis. The ozone layer around the Earth shields us all from harmful ultraviolet radiation from the sun. Without the ozone layer, life on earth would not exist. Exposure to increased levels of ultraviolet radiation can cause cataracts, skin cancer, and immune system suppression in humans as well as innumerable effects on other living systems. This is why Rowland's and Molina's theory was taken so seriously, so quickly - **the stakes** **are literally the continuation of life on earth**.

### HSR Good – Urban Sprawls Impact

#### High speed rail reverses urban sprawl

**ELPC 2010** (Environmental Law & Policy Center, “Benefits of High Speed Rail”, http://elpc.org/benefits-of-high-speed-rail)

Because high speed rail promises environmental, economic, and transportation benefits, it has garnered broad support from throughout the Midwest. Click here to view a [map of the Midwest High Speed Rail Network](http://elpc.org/wp-content/uploads/2010/02/RailMap2.17.10.pdf). High speed trains in the Midwest would be three times as energy efficient as cars and six times as energy efficient as planes. Choosing rail travel over driving or flying will decrease our dependence on foreign oil and reduce air pollution that causes global warming and harms public health. Currently, major portions of the Midwest suffer from “severe” smog problems, according to federal regulators. The construction of high-speed rail will decrease the region’s reliance on automotive transportation and therefore help reduce ozone emissions. Downtown train stations will pull jobs, people and business back into the country’s central cities thus reversing sprawl. High speed rail reduces the need for new outlying highways and airports which exacerbate sprawl.

#### Urban sprawl disrupts photosynthesis --- causing extinction

**Chandler 2000** (Lynn, Goddard Space Flight Center, “Urban Sprawl Reduces Annual Photosynthetic Production”, 2-21, http://earthobservatory.nasa.gov/Newsroom/view.php?id=20890)

According to Imhoff's research, urbanization and industrialization have resulted in the development of mega-cities and urban and suburban sprawl. The environment is altered as a result of replacing land cover with roads, housing, and commercial and industrial structures. "Human survival depends on the ability of the landscape to produce food," said Imhoff. "Food production can be fundamentally linked to primary production or photosynthesis. If the capacity of the landscape to carryout photosynthesis is substantially reduced - then the ability of the planet to support human life must also be diminished." Imhoff said data from the mid-1990's from two different satellite systems were combined with land cover maps and census information on population and housing to study the effect of urbanization on photosynthetic production in the United States. Nighttime images from a Department of Defense satellite, which show a dramatic picture of Earth's city lights, were used to determine which areas and how much land have been converted to urban, suburban, or industrial use. Maps showing urban, peri-urban (suburban), and non-urbanized areas were created from the "city-lights" satellite data. "Using a computer, we combined the city-lights satellite data with another type of satellite data that records a measure of 'greenness' or photosynthetic potential of the landscape over the course of an entire year," Imhoff said. "By merging the satellite data we could examine how urbanization affects the potential of the land surface to carryout photosynthesis by looking at the 'greenness' index inside and outside the urbanized areas for the whole continental United States." Results show that urbanization can have a measurable but variable impact on photosynthetic productivity. Annual photosynthetic productivity can be reduced by as much as 20days in areas where housing and commercial land use is very dense. "However, we also found that in resource limited regions, human activity can increase productivity by altering the environment," he said. "For example, this was the case for arid and semi-arid areas where lawn irrigation and planting changed the ecosystems from shrub lands and desert to deciduous forests." A most interesting finding according to Imhoff was that urbanization seems to elongate the growing season, yet still reduces the overall productivity of the land. "Vegetation greens up earlier in the spring and takes longer to senesce in the fall, but has lower peak season productivity than similar nearby areas that are not urbanized," he said. "This could be demonstrating a profound urban heat island effect and have implications in climate change, especially in the northern Hemisphere where urban development is most intense." Analysis of the data also found clear evidence that human beings definitely tend to locate themselves on the most productive land and that those lands are being transformed into less productive types. "The results of this study should increase our awareness of the importance of land use planning especially in the context of sustainable growth and development," Imhoff stated. "Human survival depends on photosynthesis. If urbanization and industrialization continue, the capacity of the landscape to carry out photosynthesis is substantially reduced. "

### HSR Good – AT: Economy

#### HSR will boost economic growth immediately and provide sustainability

**Rogers**, Spring **2011** (Joshua – J.D. University of Illinois College of Law, The Great Train Robbery: How Statutory Construction May Have Derailed an American High Speed Rail System, University of Illinois Journal of Law, Technology & Policy, p. Lexis)

High speed rail will also boost the economy immediately and **help stabilize the economy in the future**. The construction of high speed rail is estimated to create 1.6 million U.S. jobs. n68 Still, that number could grow significantly if, as has been proposed by some, the U.S. contracts with American companies to build the high speed rail trainsets. n69 Beyond the immediate creation of jobs, passenger rail is predicted to reduce America's dependence on foreign oil imports. n70 That reduction could also be augmented if the high speed rail system employs electric propulsion in lieu of the traditional diesel propulsion of passenger rail. n71 Thus, the U.S. would benefit from a viable high speed rail system through increased efficiency, reduced environmental impact, and **economic growth and stabilization**.

#### HSR increases multiple factors in economic growth and productivity

--Higher wages --Larger labor pools --Tourism --Construction job creation --Proximity

**Todorovich, Schned and Lane 2011** (Petra – director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 16-17)

High-speed rail’s ability to promote economic growth is grounded in its capacity to increase access to markets and exert positive effects on the spatial distribution of economic activity (Redding and Sturm 2008). Transportation networks increase market access, and economic development is more likely to occur in places with more and better transportation infrastructure. In theory, by improving access to urban markets, highspeed rail increases employment, wages, and productivity; encourages agglomeration; and boosts regional and local economies. Empirical evidence of high-speed rail’s impact around the world tends to support the following theoretical arguments for high-speed rail’s economic beneﬁts. Higher wages and productivity: The time savings and increased mobility offered by high-speed rail enables workers in the service sector and in information- exchange industries to move about the megaregion more freely and reduces the costs of face-to-face communication. This enhanced connectivity boosts worker productivity and business competitiveness, leading to higher wages (Greengauge 21 2010). Deeper labor and employment markets: By connecting more communities to other population and job centers, highspeed rail expands the overall commuter shed of the megaregion. The deepened labor markets give employers access to larger pools of skilled workers, employees access to more employment options, and workers access to more and cheaper housing options outside of expensive city centers (Stolarick, Swain, and Adleraim 2010). Expanded tourism and visitor spending: Just as airports bring visitors and their spending power into the local economy, high-speed rail stations attract new tourists and business travelers who might not have made the trip otherwise. A study by the U.S. Conference of Mayors (2010) concluded that building high-speed rail would increase visitor spending annually by roughly $225 million in the Orlando region, $360 million in metropolitan Los Angeles, $50 million in the Chicago area, and $100 million in Greater Albany, New York. **Direct job creation**: High-speed rail creates thousands of construction-related jobs in design, engineering, planning, and construction, as well as jobs in ongoing maintenance and operations. In Spain, the expansion of the high-speed AVE system from Malaga to Seville is predicted to create 30,000 construction jobs (Euro Weekly 2010). In China, over 100,000 construction workers were involved in building the high-speed rail line that connects Beijing and Shanghai (Bradsher 2010). Sustained investment could **foster the development of new manufacturing industries** for rail cars and other equipment, and generate large amounts of related employment. Urban regeneration and station area development: High-speed rail can generate growth in real estate markets and anchor investment in commercial and residential developments around train stations, especially when they are built in coordination with a broader set of public interventions and urban design strategies (see chapter 3). These interventions ensure that high-speed rail is integrated into the urban and regional fabric, which in turn ensures the highest level of ridership and economic activity. For example, the city of Lille, France, experienced greater than average growth and substantial ofﬁce and hotel development after its high-speed rail station was built at the crossroads of lines linking London, Paris, and Brussels (Nuworsoo and Deakin 2009). Spatial agglomeration: High-speed rail enhances agglomeration economies by creating greater proximity between business locations through shrinking time distances, especially when the locations are within the rail-friendly 100 to 600 mile range. Agglomeration economies occur when ﬁrms beneﬁt from locating close to other complementary ﬁrms and make use of the accessibility to varied activities and pools of skilled labor. High-speed rail has also been described as altering the economic geography of megaregions. By effectively bringing economic agents closer together, high-speed rail can create new linkages among ﬁrms, suppliers, employees, and consumers that, over time, foster spatial concentration within regions (Ahlfeldt and Feddersen 2010). This interactive process creates net economic gains in addition to the other economic beneﬁts described here.

## Solvency Extensions

### Solvency – Certainty Key

#### Long-term and predictable federal funding is necessary to encourage private investment

**Cotey**, June **2011** (Angela – associate editor of Progressive Railroading, California HSR Officials Contend with Criticism, Progressive Railroading, p. [http://www.progressiverailroading.com/high\_speed\_rail/article/California-HSR-officials-contend-with-criticism--26838#](http://www.progressiverailroading.com/high_speed_rail/article/California-HSR-officials-contend-with-criticism--26838))

But for CHSRA to achieve its larger vision, the authority will need tens of billions of dollars in additional funding — federal dollars included. The uncertainty surrounding the near- and **long-term prospects** for federal funding don’t affect CHSRA’s “day to day,” but it could impact the private sector’s willingness to pony up funds to help California build its sprawling system, says Barker. “It’s a little bit ironic because there are a lot of people, especially in Congress, saying they want private-sector participation, but private firms right now are seeing volatility and political strife, and that’s not an environment in which the private sector will want to participate,” he says. That’s why it’ll be critical for Congress to create a program to fund high-speed rail on an **ongoing basis**. And as long as the private sector is confident the federal government will pony up more funds for HSR development, there are plenty of firms interested in securing a stake in California’s project.

### Solvency – Private Investment Key

#### Private investment is critical to sustain the construction of HSR

**Jaffe**, 9/19/**2011** (Eric – contributing writer to the Atlantic Cities, The Future of California’s High-Speed Rail Is in Private Sector Hands, The Atlantic Cities, p. http://m.theatlanticcities.com/politics/2011/09/future-california-hsr-private-sector-hands/146/)

The approved ridership figures are particularly encouraging as the state shifts its attention to attracting private investments. The authority's updated business plan — which it will use to solicit bids for the central valley segment — won't be released until next month, but a sneak peek of the plan [PDF] shows a clear emphasis on raising private capital. Doing that successfully will require public seed money, which the project has in the form of $6 billion in federal funding, and strong ridership estimates, which just got a bit stronger with the new peer review. By now the authority surely recognizes that **the future of the project rests on its ability to recruit private money**. A commitment of additional state funds seems all but impossible, especially with the rising cost estimates. The House is intent on keeping rail funding low and recently set the 2012 budget discussion for rail at $7 billion less [PDF] than Obama would like. The president's jobs bill proposes $4 billion in high-speed rail funding, and a strong case can be made for giving it all to California. Still, there's zero certainty the plan will pass, and California can't afford to wait long to find out: the state must spend its federal funding by 2017 or forfeit it, which means construction needs to start in 2012. This push for private capital brings good and bad news of its own. On one hand there appears to be a substantial amount of private money out there ready to be invested in infrastructure — upwards of $250 billion [PDF], according to one recent analysis. On the other, private-public partnerships carry risks and must be approached with caution. Two reports on PPPs released this July, one by U.S. PIRG and one by the Department of Transportation, make these risks perfectly clear.

#### Private investment is empirically crucial the success of HSR

**Dutzik, Schneider, and Baxandall**, Summer **2011** (Tony – frontier Group, Jordan – Frontier Group, and Phineas – U.S. PIRG Education Fund, High-Speed Rail: Public, Private or Both?, p. 1)

Private sector companies are likely to play a major role in the construction of high-speed rail lines in the United States. Even as California nears construction of the nation’s first high-speed rail line, however, it remains unclear just how the private sector will participate in building out the nation’s high-speed rail network. Public-private partnerships —or “PPPs”—have come to play an important role in the construction of high-speed rail lines around the world. In a PPP, the public and private sectors are supposed to share the risks, responsibilities and rewards of infrastructure development.

#### PPPs increase quality and the pace of HSR investments

**Dutzik, Schneider, and Baxandall**, Summer **2011** (Tony – frontier Group, Jordan – Frontier Group, and Phineas – U.S. PIRG Education Fund, High-Speed Rail: Public, Private or Both?, p. 16)

PPPs are often touted as being able to deliver infrastructure projects faster, cheaper or with better quality than a public-sector entity. This is not to say that private entities are inherently better suppliers of infrastructure than public agencies. Private entities bring many inherent disadvantages, including higher capital costs and the need to cover financial returns to shareholders. The process of undertaking a PPP also incurs transaction costs—such as the potential need to pay stipends to would-be bidders to help defray the cost of preparing proposals. 24 States and localities that have pursued toll road PPPs in the United States, for example, typically pay millions to auditing, consulting and legal firms. A key question for government agencies considering PPPs is the degree to which the savings purportedly delivered by private companies are real or illusory. Real savings can result from a private company’s access to expertise and experience, its ownership of proprietary technologies, or economies of scale. In the case of high-speed rail, there are several international firms that have amassed decades of experience in the construction and operation of high-speed rail lines, and may be effective competitors to build similar systems in the United States.

### Solvency – Federal Key

#### Federal funding is key to clarity and sustainability of HSR

**Todorovich, Schned and Lane 2011** (Petra – director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 26)

Even though PRIIA is authorized through 2013, stakeholders in the rail industry, including one of the drafters of PRIIA, have remarked on the need to adjust federal rail policy to respond to current circumstances, including greater political instability in the Middle East and its implications for America’s dependence on foreign oil; growing international and private sector interest in helping to ﬁnance high-speed rail in the United States; and the president’s own ambitious proposals for a national high-speed rail network to give 80 percent of Americans access to high-speed rail over the next 25 years (Gardner 2011). Such a vision requires a stronger and more active federal commitment that must start with **secure funding**. The most recent setback of zero funding for high-speed rail in the FY 2011 budget underscores the need for a sustainable revenue source as reliable as funding for highway and transit programs in the past. President Obama’s proposal to include a $53 billion, six-year high-speed rail program as part of the surface transportation bill would help to achieve this kind of equity among transportation modes. In conjunction with a funding strategy, the role of high-speed rail in America’s larger transportation network needs to be better deﬁned (U.S. GAO 2009). A sharper, more narrowly focused program directed at corridors that meet clearly articulated objectives for high-speed rail service would address criticisms that the program is diffuse, ineffective, and dependent on ongoing subsidies. Nationally available data could help to evaluate the most promising regions for attracting ridership and enhancing economic and other beneﬁts. A phasing plan and funding allocation strategy could help develop the full build-out of a national network by helping states secure rights-of-way for high-speed rail corridors. Another challenge is to clarify the differences between conventional and high-speed rail corridors. PRIIA provides federal grants for both conventional passenger rail and new high-speed corridors, although the media has tended to focus on the high-speed program. Neither PRIIA nor ARRA speciﬁed the share of federal funding to be used for high-speed Core Express corridors versus conventional passenger rail. In fact, the dearth of high-speed rail projects in the planning pipeline means that grants will be shared among various types of rail projects. A more active role by the federal government could help clarify the respective roles of high-speed Core Express corridors and conventional Regional and Emerging/Feeder routes, including funding them through separate programs and clearly deﬁning the objectives for each type of rail service. Funding for maintaining and upgrading existing rail corridors could be provided through formula funds based on passenger train movements, track miles, or ridership. President Obama’s FY 2012 budget proposal for the Department of Transportation moved in this direction by establishing different competitive grant programs, including network development for constructing new corridors and system preservation for maintaining safety and reliability on existing corridors (White House 2011).

### Solvency – Funding Solves

#### Increasing funding for HSR will jumpstart the projects

**Rogers**, Spring **2011** (Joshua – J.D. University of Illinois College of Law, The Great Train Robbery: How Statutory Construction May Have Derailed an American High Speed Rail System, University of Illinois Journal of Law, Technology & Policy, p. Lexis)

2. **Making a Sufficient Down Payment on an American High Speed Rail Network** Only slightly more complicated than correcting the speed standard discrepancies would be correcting the initial investment shortfall left by ARRA. Admittedly, the 150 mph standard is somewhat arbitrary, n146 but, so long as the speed standard falls within a range of acceptable speeds, it is the [\*234] uniformity that truly benefits high speed rail development. In contrast, when discussing a federal funding allocation in the tens of billions of dollars, an arbitrary amount will not suffice. The next steps in securing a down payment sufficient to jump start development of a high speed rail network are planning and cost estimation. Those are exactly the types of projects that a newly formed federal high speed rail administration would need to start with. That being said, given the previous analysis in part III.C.3., we know that a reasonable down payment would range between $ 75-$ 100 billion for construction of the eleven designated high speed rail corridors. Thus, Congress can appropriate an amount in that range to the new federal high speed rail administration, requiring that no more than 10% be allocated to planning and that, other than planning, the funds only be used for construction. 3. Constructing Targeted Corridors and Creating a Plan for Comprehensive High Speed Rail in the Future With an allocation of $ 75-$ 100 billion, construction on every federally designated high speed rail corridor could start relatively soon. Planning and analysis of high speed rail in most of these corridors has been ongoing for nearly two decades. n147 At the same time, contemplation of a comprehensive system should not generally require a delay in construction of the several corridors because the contemplation can be something as **simple as drawing lines on a map until a comprehensive network appears**. Some say that is even how the interstate highway system began. n148 Even better, give the new federal high speed rail administration 90 days to prepare a map of what high speed rail could look like in fifty years, if America later chooses to develop a comprehensive system, and use that projection to ensure that the comprehensive system could naturally develop from the corridor system. Thus, the U.S. can still fulfill the vision and promise of high speed rail, by establishing a permanent federal high speed rail administration and standardizing speed requirements, increasing initial funding, and beginning construction while continuing planning.

### Solvency – Public-Private Funding

#### A strong and consistent federal commitment is key to spark a public-private partnership on HSR

**Todorovich, Schned and Lane 2011** (Petra – director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 53)

A sustainable funding strategy, including **reliable federal commitments**, is needed to put the HSIPR Program on a ﬁrm footing and inspire conﬁdence among states and the private sector. This strategy can make use of a variety of public and private ﬁnancing tools that leverage net revenue streams generated by high-speed rail operations. When approaching public- private partnerships, a proper allocation of risk among the parties is critical to a successful project.

#### Public-private partnership on HSR covers the upfront cost of construction

**Todorovich, Schned and Lane 2011** (Petra – director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 49)

Leveraging public investment: Leveraging public investment with private capital, either through the use of federal ﬁnancing tools or availability payments, can help pay for high-speed rail’s large upfront costs. These mechanisms make large projects feasible **without the need for the government to provide 100 percent public funding in advance**. Federal ﬁnancing tools include quali-ﬁed tax credit bonds such as Build America Bonds, which can draw a wide variety of investors to contribute to transportation projects. Availability payments allow teams of construction and ﬁnance ﬁrms to begin construction of infrastructure projects through their own debt and equity. They later receive reimbursements from the government as particular milestones are reached.

### Solvency – Reliable Funding

#### Predictable funding is key to HSR success

**Todorovich, Schned and Lane 2011** (Petra – director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 55-56)

While passage of the American Recovery and Reinvestment Act in 2009 marked a new period of federal funding for highspeed and passenger rail, the elimination of funds for the HSIPR Program in the FY 2011 budget underscores the need for a sustainable revenue source to ensure long-term success. Such a commitment will not be possible with **unpredictable appropriations**, which have ranged widely from $8 billion in 2009 to negative $400 million in 2011.

#### Permanent funding is key to ridership and emission benefits of HSR

**C**enter for **C**lean **A**ir **P**olicy/**C**enter for **N**eighborhood **T**echnology, January **2006** (High Speed Rail and Greenhouse Gas Emissions in the U.S., p. 15)

• Develop Sustainable Finance Mechanisms for HSR

As recent Congressional debates illustrate, funding intercity passenger rail transportation continues to be a challenging, but critical issue in the US. The consistent service and quality that sustainable financing can help ensure is likely to **increase ridership** and the resultant **emissions benefit** of any high speed rail system.

## Off Case Answers

### Topicality Its Answers

#### Counter-Interpretation –

#### “Its” denotes possession

Glossary of English, 5 (http://www.usingenglish.com/glossary/possessive-pronoun.html)

Mine, yours, his, hers, its, ours, theirs are the possessive pronouns used to substitute a noun and to show possession or ownership. EG. This is your disk and that's mine. (Mine substitutes the word disk and shows that it belongs to me.)

#### Possession means control over

Oxford Dictionaries, 11 (http://oxforddictionaries.com/definition/possession)

Possession Pronunciation:/pəˈzɛʃ(ə)n/ noun 1 [mass noun] the state of having , owning, or controlling something: she had taken possession of the sofa the book came into my possession he remains in full possession of his sanity

#### We Meet – Federal government will control public-private partnerships on HSR

**Hart**, 5/23/**2012** (Thomas – director of government relations at Quarles & Brady, High-speed rail’s many benefits, Politico, p. http://dyn.politico.com/printstory.cfm?uuid=FE4322D1-BD75-4831-ADA0-41E12BB57608)

A public-private partnership maintains public control of infrastructure assets while the private sector upgrades infrastructure and passenger service. Private investors would finance part of the construction and invest in real estate development around the train stations, and private rail operators would compete for millions of passengers while servicing a huge regional market. Amtrak could upgrade the Acela into a true high-speed rail service and build on its 2011 success of almost $2 billion in ticket revenue and a record-breaking 30 million passengers.

### State Infrastructure Bank Answers

#### No solvency – states lack funds to fund SIB’s

Christman and Riordan, 11 (Anastasia, Senior Policy analyst at the National Employment Law Project, and Christine, Policy Analyst at the National Employment Law Project, “State Infrastructure Banks: Old Idea Yields New Opportunities for Job Creation”, National Employment Law Project, Briefing Paper, December, http://www.nelp.org/page/-/Job\_Creation/State\_Infrastructure\_Banks.pdf?nocdn=1)

Not surprisingly, the biggest challenge to establishing a SIB in this economy is funding. Many states are already struggling with shortfalls in transportation dollars. New Jersey, which depends heavily on toll revenues to finance its transportation projects, is looking at shortfalls of more than $47 million— five percent of its target. 57 The state’s turnpike authority has cut its 2011 operating budget by $10 million, and rating agencies have lowered their rating on New Jersey turnpike bonds even as the agency tries to implement a 10-year capital improvement program. 58 In Virginia, maintaining roads alone threatens to deplete the state’s Highway Maintenance and Operating Fund, and the state has been forced to repeatedly shift funds from its Transportation Trust Fund for construction to pay for maintenance.

#### No solvency – SIB’s only have experience with small road projects

Freemark, 12 (Yonah, Urban Leaders Fellow, sponsored by the Rockefeller Foundation, “How to Pay for America's Infrastructure”, The Atlantic, http://www.theatlanticcities.com/politics/2012/01/solution-americas-infrastructure-woes/845/)

In most states studied, the vast majority of infrastructure bank funds has gone to roads projects, indicating that the commitment of the federal government to multi-modality - 20 percent of federal surface transportation spending generally goes to public transit - **has not been followed through in the states**. Texas has loaned virtually none of its $477 million total to transit, while Ohio, Oregon, and Pennsylvania have devoted just two to four percent of their funding to bus and rail improvement projects. Only Florida stands out, with 11 percent of its loans going to transit, thanks to major investments in projects like the SunRail commuter line. McGowan, of the Pennsylvania bank, said that "there are no maximums or minimums" for the types of projects approved, one problem might be that few transit agencies apply for aid. In Ohio, Ohio Department of Transportation Press Secretary Steve Faulkner agreed. "Any type of transportation project is eligible for state infrastructure bank funding" he says. "So, the number of transit loans is a direct result of the corresponding number of transit applications received." The state infrastructure banks are making sound financial choices when it comes to the projects they sponsor. Kane, of Florida, told me that the state’s program had never "experienced any default on repayments." Ohio’s Faulkner said "all loans - with the exception of two - were repaid." In both cases, the defaulter was a private developer. Though this sample of infrastructure banks does not profess to represent the sum of experience on the subject, the five considered are large states with a mix of urban, suburban, and rural environments, and a mix of Democratic and Republican constituents. Thus their involvement with infrastructure banks would likely to be followed in other states if Washington were to choose to invest more in them. Yet the mixed outcomes - responsible management but a general focus on small roads projects in most states - suggests that increased funding for state infrastructure banks will hardly provide a panacea for resolving national infrastructure woes.

#### No solvency – lack coordination between states for nationwide projects

Anand, 11 (Anika, “Bank plan would help build bridges, boost jobs”, MSNBC, 7/6 http://www.msnbc.msn.com/id/43606379/ns/business-eye\_on\_the\_economy/t/bank-plan-would-help-build-bridges-boost-jobs/#.T6xxu7PWa8A)

There are currently a handful of state infrastructure banks, although it’s more difficult for them to cross state borders and bring municipalities together **to fund national-scale projects**. Opponents also point to public-private infrastructure projects that have drawn public criticism, such as the $3.8 billion Indiana Toll Road, which was leased to foreign private investors.

### State Infrastructure Bank Answers – Doesn’t Solve Growth/Jobs

#### Infrastructure bank does not lead to growth or jobs.

**Utt**, 8/30/**2011** (Ronald – Herbert and Joyce Morgan senior research fellow in the Thomas A. Roe Institute for Economic Policy Studies at the Heritage Foundation, Obama’s Peculiar Obsession with Infrastructure Banks will not aid economic revival, p. http://www.heritage.org/research/reports/2011/08/using-infrastructure-banks-to-spur-economic-recovery)

The President’s proposal for an infrastructure bank is one idea that he and other progressives have been flogging for the past few years.[1] Although several infrastructure bank proposals have been introduced in Congress,[2] all involve the creation of a new federal bureaucracy that would provide federally funded loans and grants to approved infrastructure proposals submitted to the bank by eligible entities. Funds to provide these loans would either be borrowed by the bank or provided by appropriations, depending on the proposal. But an infrastructure bank would do little to spur the economic recovery—and nothing to create new jobs. Misplaced Humor In reviewing these infrastructure plans it is apparent that, as a proposal to jump-start the economy, these banks possess all the liabilities of (but are even more ineffective than) the failed American Revitalization and Investment Act of 2009 (ARRA), which committed $800 billion to stimulus spending, including $48.1 billion for transportation infrastructure. As the President has recently acknowledged, and The Heritage Foundation predicted,[3] the funded projects have been very slow to get underway and have had a limited impact on economic activity. In a recent meeting with his Jobs Council, Obama noted that “Shovel-ready was not as…uh…shovel-ready as we expected.” The media reported that the “Council [Council on Jobs and Competitiveness ], led by GE’s Jeffrey Immelt, erupted in laughter.”[4] That the President and his business community advisers found this waste of $800 billion and the subsequent loss of hundreds of thousands of jobs a source of humor is emblematic of the Administration’s failed approach to the economy. Banks Make Loans, Not Grants Take for example the President’s national infrastructure bank proposal, which was included in his February 2011 highway reauthorization proposal. His bank would be part of the Department of Transportation and would be funded by an appropriation of $5 billion per year in each of the next six years. Obama’s “bank” would be permitted to provide loans, loan guarantees, and grants to eligible transportation infrastructure projects.[5] As Heritage and others have noted, the common meaning of a “bank” describes a financial intermediary that borrows money at one interest rate and lends it to credit-worthy borrowers at a somewhat higher interest rate to cover the costs incurred in the act of financial intermediation. In this regard, the Obama proposal is not a bank, and it relies entirely on congressional appropriations—thus, on deficit finance and taxpayer bailouts. Grants are not paid back, prompting “one former member of the National Infrastructure Financing Commission to observe that ‘institutions that give away money without requiring repayment are properly called ‘foundations’ not ‘banks.’”[6] Senator James Inhofe (R–OK), the ranking member of the Senate Environment and Public Works Committee, further noted that: Banks don’t give out grants; they give out loans. There is also currently a mechanism for giving out federal transportation grants—it is called the highway bill. I don’t believe an infrastructure bank will increase total transportation investment—it will only take money away from what would otherwise go through the existing highway and transit programs.[7] Bureaucratic Delays Although Obama has yet to offer any legislation to implement his “bank,” infrastructure bank bills introduced by Senator John Kerry (D–MA) and Representative Rosa DeLauro (D–CT) illustrate the time-consuming nature of creating such a bank, suggesting more than a year or two will pass before the first dollar of a grant or loan is dispersed to finance a project.[8] Both the DeLauro and Kerry bills are—appropriately—concerned with their banks’ bureaucracy, fussing over such things as detailed job descriptions for the new executive team, how board members will be appointed, duties of the board, duties of staff, space to be rented, creating an orderly project solicitation process, an internal process to evaluate, negotiate, and award grants and loans, and so on. Indicative of just how bureaucracy-intensive these “banks” would be, the Obama plan proposes that $270 million be allocated to conduct studies, administer his new bank, and pay the 100 new employees hired to run it. By way of contrast, the transportation component of the ARRA worked through existing and knowledgeable bureaucracies at the state, local, and federal levels. Yet despite the staff expertise and familiarity with the process, as of July 2011—two and a half years after the enactment of ARRA—38 percent of the transportation funds authorized have yet to be spent and are still sitting in the U.S. Treasury, thereby partly explaining ARRA’s lack of impact. Infrastructure “Banks” No Source of Economic Growth The President’s ongoing obsession with an infrastructure bank as a source of salvation from the economic crisis at hand is—to be polite about it—a dangerous distraction and a waste of his time. It is also a proposal that has consistently been rejected by bipartisan majorities in the House and Senate transportation and appropriations committees, and for good reason. Based on the ARRA’s dismal and remarkably untimely performance, Obama’s infrastructure bank would likely yield only modest amounts of infrastructure spending by the end of 2017 while having no measurable impact on job growth or economic activity—a prospect woefully at odds with the economic challenges confronting the nation.

### State Infrastructure Bank Answers – AT: Private Investment Net Benefit

#### Federal infrastructure funding stimulates economy in the same way as private investment – offsets crowd out

Elmendorf, 9 (Douglas W., director of the Congressional Budget Office, economist with experience throughout the federal government, “Letter to Honorable Judd Gregg Ranking Member Committee on the Budget”, Congressional Budget Office, Feb 4, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/96xx/doc9619/gregg.pdf)

The crowding-out effect would be offset somewhat by other factors. Some of the Senate legislation’s provisions, such as funding for improvements to roads and highways, might add to the economy’s potential output in much the same way that private capital investment does. Other provisions, such as funding for grants to increase access to college education, could raise long-term productivity by enhancing people’s skills. And some provisions would create incentives for increased private investment. According to CBO’s estimates, provisions that could add to long-term output account for roughly one-quarter of the legislation’s budgetary cost.

### State Infrastructure Bank Answers – AT: Private Investment Net Benefit – Perm Solvency

#### Perm solves – combination of federal and private investment is best

Infrastructure USA, 11 (“The Beneﬁts of Private Investment in Infrastructure”, August, http://www.infrastructureusa.org/wp-content/uploads/2011/09/private\_investment\_in\_infrastructure\_update\_august1.pdf)

When used alongside federal dollars, private investment in infrastructure will greatly increase the amount of jobs that can be created. At the same time, existing public sector collective bargaining agreements are honored and union representation respected. FHWA studies and economist Laura Tyson have both found that for each $1 bn in infrastructure investment 30,000 jobs could be generated. If government is able to remove obstacles that slow project delivery, private capital could multiply jobs **at an even faster rate** while pursuing more infrastructure projects over a shorter time period than displayed.

### Election Answers

#### Weak economic indicators will jeopardize Obama’s reelection

**V**oice **o**f **A**merica **News**, **6/8**/2012 (Economic Volatility Driving Close US Election, p. http://www.voanews.com/content/economic-volatility-driving-close-us-election/1205056.html)

Less than five months before Election Day, experts say weakness in the U.S. economy appears to be driving a close presidential race this year. Republicans have a new sense of momentum for their expected presidential nominee, former Massachusetts governor Mitt Romney. "Look into this race," said Romney. "This is not just a race about politics or people. It is a race about the course of the country. And I will keep America strong and I will honor in all ways the commitment of this country to be one nation, under God." A recent uptick in the U.S. jobless rate to 8.2 percent and volatility in the stock market have raised new doubts about the stability of the domestic economy, which political analysts say will be **far and away the key factor** in the November matchup between Romney and President Barack Obama, a Democrat. Republicans also seem much more enthusiastic about this year's election than four years ago when Obama trounced his Republican opponent, Senator John McCain. John Fortier is with the Bipartisan Policy Center in Washington. "Clearly the difference from 2008 is that the Republicans will be more energized," said Fortier. "They were not energized in 2008. Democrats were. I think we are at least likely to see both sides be re-energized in 2012." Fortier says the improved Republican turnout effort was on display in the recent recall vote in Wisconsin won by the incumbent Republican Governor, Scott Walker. Democrats took heart from exit polls in Wisconsin that showed voters still favor the president for re-election. But many Obama supporters are growing concerned that the weakness of the U.S. economy will be a drag on his hopes in November.

#### Transportation legislation is a win for Obama --- looks like job creation

**Lightman**, 3/12/**2012** (David, Transportation Spending – Washington Spin Makes Good Look Even Better, McClatchy, p. http://www.mcclatchydc.com/2012/03/12/141581/transportation-spending-washington.html)

The Senate on Tuesday plans to debate, and likely pass this week, an ideal election-year bill: a bipartisan plan to spend billions on highway and transit projects. Passage of the bill not only would be an economic boost, but it would serve several important political purposes. Lawmakers are boasting how the $109 billion, two-year measure would save or create as many as 2.8 million jobs. They are congratulating one another for working across party lines, a trait that hasn't been evident much in recent years. And they can go home and point to rutted roads and congested highways and brag that they did something about it. Or can they? "The highway bill is fairly routine. It's not like a special stimulus bill," said Robert Bixby, executive director of the nonpartisan Concord Coalition, a budget watchdog group. While the bill is welcome as a job producer, he said, "it's not going to make a significant dent in the jobs market." Politicians, though, tout the bill as a vital jobs measure. "This is an important piece of legislation. Not dealing with tens of jobs or hundreds of jobs or thousands of jobs, but millions of jobs," said Senate Majority Leader Harry Reid, D-Nev. Many House of Representatives Republicans prefer a longer-term approach. The House is expected to consider legislation later this month. "At this point in time, the plan is to bring up the Senate bill," said House Speaker John Boehner, R-Ohio. Independent analysts tended to agree with Bixby. "The bill does take steps in the right direction," said Joshua Schank, president and chief executive officer of the Eno Center for Transportation, a nonprofit, nonpartisan think tank. But, he said, "There's a huge amount of politics here. Congress wants to look like they're doing something for the economy, and that they're doing something in a bipartisan way."

### Politics Answers

#### There is bipartisan support for public-private partnership for HSR

**Hart**, 5/23/**2012** (Thomas – director of government relations at Quarles & Brady, High-speed rail’s many benefits, Politico, p. http://dyn.politico.com/printstory.cfm?uuid=FE4322D1-BD75-4831-ADA0-41E12BB57608)

There is growing consensus among Democrats and Republicans in Congress that the NEC is ideally suited for high-speed rail development. Differences remain, however, on the best path for development. Rep. John Mica (R-Fla.), chairman of the House Transportation and Infrastructure Committee, introduced controversial legislation last year that would privatize Amtrak, only to meet strong Democratic resistance. Tea party Republicans eliminated federal funding for high-speed rail in 2012, preferring private-sector financing. Indeed, high-speed rail funding may be zeroed out in the surface transportation bill now being negotiated in a House-Senate conference — though there is growing bipartisan support for provisions that could spark private investment through tax incentives and government guarantees. Given the current political realities, most policymakers now do support a public-private partnership model for the NEC. It’s already proven successful and for infrastructure development at the state and local level as well as in Europe and Asia.

#### Passing controversial legislation generates capital for Obama --- winners win

**Halloran 10** (Liz, Reporter – NPR, “For Obama, What A Difference A Week Made”, National Public Radio, 4-6, http://www.npr.org/templates/story/story.php?storyId=125594396)

Amazing what a win in a major legislative battle will do for a president's spirit. (Turmoil over spending and leadership at the Republican National Committee over the past week, and the release Tuesday of a major new and largely sympathetic book about the president by New Yorker editor David Remnick, also haven't hurt White House efforts to drive its own, new narrative.) Obama's Story Though the president's national job approval ratings failed to get a boost by the passage of the health care overhaul — his numbers have remained steady this year at just under 50 percent — he has earned grudging respect even from those who don't agree with his policies. "He's achieved something that virtually everyone in Washington thought he couldn't," says Henry Olsen, vice president and director of the business-oriented American Enterprise Institute's National Research Initiative. "And that's given him confidence." The protracted health care battle looks to have taught the White House something about power, says presidential historian Gil Troy — a lesson that will inform Obama's pursuit of his initiatives going forward. "I think that Obama realizes that presidential power is a muscle, and the more you exercise it, the stronger it gets," Troy says. "He exercised that power and had a success with health care passage, and now he wants to make sure people realize it's not just a blip on the map." The White House now has an opportunity, he says, to change the narrative that had been looming — that the Democrats would lose big in the fall midterm elections, and that Obama was looking more like one-term President Jimmy Carter than two-termer Ronald Reagan, who also managed a difficult first-term legislative win and survived his party's bad showing in the midterms. Approval Ratings Obama is exuding confidence since the health care bill passed, but his approval ratings as of April 1 remain unchanged from the beginning of the year, according to [Pollster.com](http://www.pollster.com/polls/us/jobapproval-obama.php). What's more, just as many people disapprove of Obama's health care policy now as did so at the beginning of the year. According to the most recent numbers: Forty-eight percent of all Americans approve of Obama, and 47 disapprove. Fifty-two percent disapprove of Obama's health care policy, compared with 43 percent who approve. Stepping Back From A Precipice Those watching the re-emergent president in recent days say it's difficult to imagine that it was only weeks ago that Obama's domestic agenda had been given last rites, and pundits were preparing their pieces on a failed presidency. Obama himself had framed the health care debate as a referendum on his presidency. A loss would have "ruined the rest of his presidential term," says Darrell West, director of governance studies at the liberal-leaning Brookings Institution. "It would have made it difficult to address other issues and emboldened his critics to claim he was a failed president." The conventional wisdom in Washington after the Democrats lost their supermajority in the U.S. Senate when Republican Scott Brown won the Massachusetts seat long held by the late Sen. Edward Kennedy was that Obama would scale back his health care ambitions to get something passed. "I thought he was going to do what most presidents would have done — take two-thirds of a loaf and declare victory," says the AEI's Olsen. "But he doubled down and made it a vote of confidence on his presidency, parliamentary-style." "You've got to be impressed with an achievement like that," Olsen says. But Olsen is among those who argue that, long-term, Obama and his party would have been better served politically by an incremental approach to reworking the nation's health care system, something that may have been more palatable to independent voters Democrats will need in the fall. "He would have been able to show he was listening more, that he heard their concerns about the size and scope of this," Olsen says. Muscling out a win on a sweeping health care package may have invigorated the president and provided evidence of leadership, but, his critics say, it remains to be seen whether Obama and his party can reverse what the polls now suggest is a losing issue for them.

#### Studies prove that political capital barely affects the outcome of legislation

**Beckmann and Kumar**, September **2011** (Matthew – associate professor of political science at the University of California, Irvine, and Vimal – professor of economics at the Indian Institute of Technology, Opportunism in Polarization: Presidential success in Senate Key Votes, 1953-2008, Presidential Studies Quarterly, Vol. 41, Iss. 3, p. 488-503)

The final important piece in our theoretical model—presidents' political capital—also finds support in these analyses, though the results here are less reliable. Presidents operating under the specter of strong economy and high approval ratings get an important, albeit moderate, increase in their chances for prevailing on “key” Senate roll-call votes (b = .10, se = .06, p < .10). Figure 4 displays the substantive implications of these results in the context of polarization, showing that going from the lower third of political capital to the upper third increases presidents' chances for success by 8 percentage points (in a setting like 2008). Thus, political capital's impact does provide an important boost to presidents' success on Capitol Hill, but it is certainly not potent enough to overcome **basic congressional realities**. Political capital is just strong enough to put a presidential thumb on the congressional scales, which often will not matter, but can in close cases.

### Ext – Winners Win

#### All their “plan controversial” links feed our turn. Controversial wins swings Dems

**Sargent**, 8/23/**2010** (Greg, Why is left so disappointed in Obama?, The Washington Post, p. http://voices.washingtonpost.com/plum-line/2010/08/politico\_channels\_professional.html)

The fetishizing of bipartisanship, and the hope that a few Republicans could be induced to back his agenda, is also what led Obama to avoid taking a strong, bottom-line stand on core principles, such as the public option. White House advisers also seemed reluctant for Obama to stake real political capital on provisions that were likely to fail, which also contributed to his mixed messages on core liberal priorities. To be clear, I tend to think this critique is overstated: Obama has passed the most ambitious domestic agenda since FDR, and there are some grounds for believing that the White House got as much as it possibly could have. But my bet is that if the White House hadn't fetishized bipartisanship early on; if Obama had drawn a sharper contrast with the GOP from the outset; and if he had taken a stronger stand on behalf of **core priorities even if they were destined for failure**, his lefty critics would be more willing to give him the benefit of the doubt.

#### Wins spill over.

**Marshall and Prins**, September **2011** (Bryan – associate professor of political science at Miami University of Ohio, and Brandon – professor of political science at the University of Tennessee, Power or Posturing? Policy availability and congressional influence on U.S. presidential decision to use force, Presidential Studies Quarterly, p. ProQuest)

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

#### Steamroller effect – Reagan proves.

**Green** **2010** – professor of political science at Hofstra University (David Michael Green, 6/11/10, " The Do-Nothing 44th President ", http://www.opednews.com/articles/The-Do-Nothing-44th-Presid-by-David-Michael-Gree-100611-648.html)

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

#### Changes voting calculations.

**Ornstein**, 5/15/**2001** (Norman – resident scholar at the American Enterprise Institute, How is Bush Governing, Transition to Governing Project, p. www.aei.org/research/tgp/events/eventID.281,projectID.12/transcript.asp)

What flows from that as well is, use every bit of political capital you have to achieve early victories that will both establish you as a winner, because the key to political power is not the formal power that you have. Your ability to coerce people to do what they otherwise would not do. Presidents don't have a lot of that formal power. It's as much psychological as it is real. If you're a winner and people think you're a winner, and that issues come up and they're tough but somehow you're going to prevail, they will act in anticipation of that. Winners win.

### Spending Answers

#### Federal infrastructure funding not zero sum

PRI, 12 (Public Radio International, “Obama's vision for a transportation makeover struggling to leave the station”, Jan 24, http://www.pri.org/stories/politics-society/government/obama-s-vision-for-a-transportation-makeover-struggling-to-leave-the-station-8099.html)

That's been the fault line for the Obama administration, Goldmark said. On the other hand, though, **it's likely not a zero-sum game.** America will need to develop a multimodal transportation infrastructure to move forward, but including roads and planes as well as rails.

#### Supplemental revenue will cover the cost of HSR

**Todorovich, Schned and Lane 2011** (Petra – director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 44)

Implementation of high-speed rail in the Northeast Corridor will be at least a decade behind the effort in California, where construction is scheduled to begin as early as fall 2012. Infrastructure costs in the Northeast Corridor are also considerably higher, with estimates ranging from $89 to $117 billion for a new, dedicated system, and between $14 and $52 billion for upgrades to the existing corridor (University of Pennsylvania 2011; Amtrak 2010a; 2010b). Nevertheless, the $2.7 trillion economy in the Northeast (Bureau of Economic Analysis 2009), its high population density, and the growing congestion of its existing rails, roads, and runways all make a strong case for these investments. These dynamics also make dedicated high-speed rail in the Northeast ﬁnancially viable. The UPenn study found that such a system could completely cover its operating costs and a portion of its capital costs through farebox and supplementary revenues (University of Pennsylvania 2011).

#### No Link – Public-Private Partnership

#### A) A strong and consistent federal commitment is key to spark a public-private partnership on HSR

**Todorovich, Schned and Lane 2011** (Petra – director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 53)

A sustainable funding strategy, including **reliable federal commitments**, is needed to put the HSIPR Program on a ﬁrm footing and inspire conﬁdence among states and the private sector. This strategy can make use of a variety of public and private ﬁnancing tools that leverage net revenue streams generated by high-speed rail operations. When approaching public- private partnerships, a proper allocation of risk among the parties is critical to a successful project.

#### B) Public-private partnership on HSR covers the upfront cost of construction

**Todorovich, Schned and Lane 2011** (Petra – director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 49)

Leveraging public investment: Leveraging public investment with private capital, either through the use of federal ﬁnancing tools or availability payments, can help pay for high-speed rail’s large upfront costs. These mechanisms make large projects feasible **without the need for the government to provide 100 percent public funding in advance**. Federal ﬁnancing tools include quali-ﬁed tax credit bonds such as Build America Bonds, which can draw a wide variety of investors to contribute to transportation projects. Availability payments allow teams of construction and ﬁnance ﬁrms to begin construction of infrastructure projects through their own debt and equity. They later receive reimbursements from the government as particular milestones are reached.

### Ext – Private Investment Solves Cost

#### Private investment is key to fund HSR

**Dutzik, Schneider, and Baxandall**, Summer **2011** (Tony – frontier Group, Jordan – Frontier Group, and Phineas – U.S. PIRG Education Fund, High-Speed Rail: Public, Private or Both?, p. 16)

Access to capital is not typically a strong suit of private entities. Government agencies are capable of borrowing large amounts of money to finance public infrastructure at relatively low cost. However, in the current atmosphere of constrained public budgets, access to private capital may make the difference between building necessary high-speed rail projects and leaving them on the drawing board for years to come. Because of the multi-billion dollar price tag of most high-speed rail projects, governments in both Europe and the United States have stated that private investment will be necessary to build out their high-speed rail networks.