High Speed Rail Affirmative - NCPA

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Advantage One – The Economy

The current economic crisis has nothing to do with budget or monetary concerns. Only deep infrastructural reforms can adapt the U.S. to the knowledge economy and spur recovery

Florida 2010 [Richard, Senior Editor at The Atlantic, Director of the Martin Prosperity Institute and Professor of Business and Creativity at the Rotman School of Management at the University of Toronto, previously held professorships at George Mason University and Carnegie Mellon University and taught as a visiting professor at Harvard and MIT, holds a Ph.D. from Columbia University, "The Roadmap to a High-Speed Recovery," The New Republic, August 12th, Available Online at http://www.tnr.com/print/article/economy/76961/richard-florida-reset-recovery-economy-future, Accessed 06-10-2012]

But now we find ourselves having the wrong debate—about whether a stimulus is needed or not—and we need to shift it. **The fiscal and monetary fixes that have helped mature industrial economies like the United States get back on their feet since the Great Depression are not going to make the difference this time.** Mortgage interest tax credits and massive highway investments are artifacts of our outmoded industrial age; in fact, our whole housing-auto complex is superannuated. As University of Chicago economist Raghuram Rajan wrote recently in the Financial Times: "**The bottom line in the current jobless recovery suggests the US has to take deep structural reforms to improve its supply side. The quality of its financial sector, its physical infrastructure, as well as its human capital, all need serious economic and politically difficult upgrades.**" Now we're getting to the nub of the matter.¶ Why? Because **this is no bump in the business cycle that we are going through; it is an epochal event, comparable in magnitude and scope to the Great Depression** of the 1930s**, and even more so,** as historian Scott Reynolds Nelson has observed, **to the decades-long crisis that began in 1873. Back then our economy was undergoing a fundamental shift from agriculture to industry. We are in the midst of an equally tectonic transition today, as our industrial economy gives way to a post-industrial knowledge economy—but by focusing all our attention on whether we need a bigger stimulus or a smaller deficit, we're flying blind.¶ These kind of epochal changes**, which I have **called "great resets," are long, generational processes.** They are **driven by improvements in efficiency and productivity,** and by the waves of innovation that Joseph Schumpeter called "creative destruction." When economies slow down, inefficient companies go by the boards. Seeking better returns on investment, businesses redirect capital towards innovation. When the economist Alfred Kleinknecht diagrammed U.S. patents along a timeline extending through the nineteenth century, he found a huge spike in the 1870s, 1880s, and 1890s, a period of depression that also saw the invention of electric power, modern telephony, and street and cable car systems. The economic historian Alexander Field observed a similar clustering and unleashing of innovation in the 1930s, which he dubbed the most "technologically progressive decade" of the twentieth century. More R&D labs opened in the first four years of the Great Depression than in the entire preceding decade, 73 compared to 66. By 1940, the number of people employed in R&D had quadrupled, increasing from fewer than 7,000 in 1929 to nearly 28,000 by 1940, according to the detailed historical research of David Mowery and Nathan Rosenberg.¶ **Our transition from a Fordist mass production economy**, based on the assembly line, **to a knowledge economy**, in which the driving force is creativity and technological innovation, **has been under way** for some time; the evidence can be seen in the physical decline of the old manufacturing cities and the boom in high-tech centers like Silicon Valley, government boomtowns like Washington DC, and college towns from Boulder to Ann Arbor. Between 1980 and 2006, the U.S. economy added some 20 million new jobs in its creative, professional, and knowledge sectors. Even today, unemployment in this sector of the economy has remained relatively low, and according to Bureau of Labor Statistics projections, is likely to add another seven million jobs in the next decade. By contrast, the manufacturing sector added only one million jobs from 1980 to 2006, and, according to the BLS, will lose 1.2 million by 2020.¶ This is the future towards which our post-industrial economy is already trending—and **government should be proposing policies that will help to create a new geography and a new way of life to sustain and support it.** But that doesn't mean we need a centralized public bureaucracy to speed the process of change. As it happens, innovation occurs not only within big companies, major laboratories, and research universities, but also on

the margins of business and academia. John Seely Brown, the former director of Xerox's storied Palo Alto Research Center (PARC), has observed that many, if not most, of today's high-tech innovations are products of the open-ended, collaborative explorations of hackers. Steve Jobs didn't invent the PC; he saw its components at work at PARC, realized their potential, and put the pieces together.

U.S. infrastructure is undermining our global competitiveness and risks economic collapse

Building America's Future, 11 – a bipartisan coalition of elected officials dedicated to bringing about a new era of U.S. investment in infrastructure that enhances our nation's prosperity and quality of life. ("Falling Apart and Falling Behind", Transportation Infrastructure Report, http://www.bafuture.com/sites/default/files/Report_0.pdf)

Rebuilding America's economic foundation is one of the most important missions we face in the 21st century. Our parents and grandparents built America into the world's leading economic superpower. We have a responsibility to our own children and grandchildren to strengthen—not squander —that inheritance, and to pass on to them a country whose best days are still ahead. Our citizens live in a turbulent, complicated, and competitive world. The worst recession in eighty years cost us trillions in wealth and drove millions of Americans out of their jobs and homes. Even more, it called into question their belief in our system and faith in the way forward. **Our infrastructure—**and the good policy making that built it—**is a key reason America became an economic superpower**. But many of the great decisions which put us on that trajectory are now a half-century old. In the last decade, **our global economic competitors have led the way in planning and building the transportation networks of the 21st century. Countries around the world have not only started spending more than the U*nited* S*tates* does today**, but they made those financial commitments—of both public and private dollars—on the basis of 21st-century strategies that will equip them to make commanding strides in economic growth over the next 20-25 years. **Unless we make significant changes in our course and direction, the foreign competition will pass us by, and a real opportunity to restore America's economic strength will be lost**. The American people deserve better. Falling Apart and Falling Behind lays out the economic challenges posed by our ailing infrastructure, provides a comparative look at the smart investments being made by our international competitors, and suggests a series of recommendations for crafting new innovative transportation policies in the U.S. A Mounting Crisis This report frames the state of our infrastructure in terms of the new economic realities of the 21st-century economy and presents the challenges we currently face. **The surge in global trade has realigned America's business transport needs, complicating supply chains and increasing the need for sophisticated intermodal transportation. Our economically vital gateways and corridors now operate over capacity, imposing costs of $200 billion a year. Our passenger transport system, especially in our major metropolitan regions, is also burdened with costly congestion as passenger travel increases. Largely run on gasoline, our transportation system is environmentally, politically, and economically unsustainable**. We have the world's worst air traffic congestion, in part because we are still using the radar-based air traffic control system developed in the 1950s.

US economic competitiveness prevents multiple scenarios for global nuclear conflicts

Friedberg & Schoenfeld 8 (Aaron Friedberg is a professor of politics and international relations at Princeton University's Woodrow Wilson School. Gabriel Schoenfeld, senior editor of Commentary, is a visiting scholar at the Witherspoon Institute in Princeton, N.J., "The Dangers of a Diminished America," Wall Street Journal, Ocbtober 21, 2008,http://online.wsj.com/article/SB122455074012352571.html]

With the global financial system in serious trouble, is America's geostrategic dominance likely to diminish? If so, what would that mean? **One immediate implication of the crisis that began on Wall Street and spread across the world is that the primary instruments of U.S. foreign policy will be crimped**. The next president will face an entirely new and adverse fiscal position. Estimates of this year's federal budget deficit already show that it has jumped $237 billion from last year,

to $407 billion. With families and businesses hurting, there will be calls for various and expensive domestic relief programs. In the face of this onrushing river of red ink, both Barack Obama and John McCain have been reluctant to lay out what portions of their programmatic wish list they might defer or delete. Only Joe Biden has suggested a possible reduction -- foreign aid. This would be one of the few popular cuts, but in budgetary terms it is a mere grain of sand. Still, Sen. Biden's **comment hints at where we may be headed: toward a major reduction in America's world role, and perhaps even a new era of financially-induced isolationism**. Pressures to cut defense spending, and to dodge the cost of waging two wars, already intense before this crisis, are likely to mount. Despite the success of the surge, the war in Iraq remains deeply unpopular. Precipitous withdrawal -- attractive to a sizable swath of the electorate before the financial implosion -- might well become even more popular with annual war bills running in the hundreds of billions. **Protectionist sentiments are sure to grow stronger as jobs disappear in the coming slowdown**. Even before our current woes, calls to save jobs by restricting imports had begun to gather support among many Democrats and some Republicans. In a prolonged recession, gale-force winds of protectionism will blow. Then there are the dolorous consequences of a potential collapse of the world's financial architecture. For decades now, Americans have enjoyed the advantages of being at the center of that system. **The worldwide use of the dollar, and the stability of our economy, among other things, made it easier for us to run huge budget deficits**, as we counted on foreigners to pick up the tab by buying dollar-denominated assets as a safe haven. Will this be possible in the future? Meanwhile, **traditional foreign-policy challenges are multiplying. The threat from al Qaeda and Islamic terrorist affiliates has not been extinguished. Iran and North Korea are continuing on their bellicose paths, while Pakistan and Afghanistan are progressing smartly down the road to chaos. Russia's new militancy and China's seemingly relentless rise also give cause for concern. If America now tries to pull back from the world stage, it will leave a dangerous power vacuum. The stabilizing effects of our presence in Asia, our continuing commitment to Europe, and our position as defender of last resort for Middle East energy sources and supply lines could all be placed at risk. In such a scenario there are shades of the 1930s, when global trade and finance ground nearly to a halt, the peaceful democracies failed to cooperate, and aggressive powers led by** the *remorseless* **fanatics who rose up on the crest of economic disaster exploited their divisions. Today we run the risk that rogue states may choose to become ever more reckless with their nuclear toys**, just at our moment of maximum vulnerability. **The aftershocks of the financial crisis will almost certainly rock our principal strategic competitors even harder than they will rock us**. The dramatic free fall of the Russian stock market has demonstrated the fragility of a state whose economic performance hinges on high oil prices, now driven down by the global slowdown. China is perhaps even more fragile, its economic growth depending heavily on foreign investment and access to foreign markets. Both will now be constricted, inflicting economic pain and perhaps even sparking unrest in a country where political legitimacy rests on progress in the long march to prosperity. None of this is good news if the authoritarian leaders of these countries seek to divert attention from internal travails with external adventures. As for our democratic friends, the present crisis comes when many European nations are struggling to deal with decades of anemic growth, sclerotic governance and an impending demographic crisis. Despite its past dynamism, Japan faces similar challenges. India is still in the early stages of its emergence as a world economic and geopolitical power. What does this all mean? **There is no substitute for America on the world stage. The choice we have before us is between the potentially disastrous effects of disengagement and the stiff price tag of continued American leadership**. Are we up for the task? The American economy has historically demonstrated remarkable resilience. Our market-oriented ideology, entrepreneurial culture, flexible institutions and favorable demographic profile should serve us well in whatever trials lie ahead. The American people, too, have shown reserves of resolve when properly led. But experience after the Cold War era -- poorly articulated and executed policies, divisive domestic debates and rising anti-Americanism in at least some parts of the world -- appear to have left these reserves diminished. A recent survey by the Chicago Council on World Affairs found that 36% of respondents agreed that the U.S. should "stay out of world

affairs," the highest number recorded since this question was first asked in 1947. The economic crisis could be the straw that breaks the camel's back.

Building HSR is essential to our future competition – other countries are beating us to the punch

Yaro, '10 – president of the Regional Plan Association, a policy, research and advocacy group, and Professor of Practice in City and Regional Planning at the University of Pennsylvania (Robert D. "An Investment We Have to Make," New York Times, October 14 2010, http://www.nytimes.com/roomfordebate/2010/10/13/will-we-ever-have-high-speed-trains/an-investment-we-have-to-make)

For these reasons **Japan, China, Taiwan and Europe -- and now Brazil, South Africa, Morocco, India and Vietnam -- already have or are building high-speed rail. Unless we build similar systems here, we will find ourselves at a growing competitive disadvantage caused by increasing congestion and inefficiency in moving people and goods.** At an estimated $500 billion, **a national high-speed rail system** won't come cheap. But it **will help enable a major expansion in the U.S. gross domestic product by mid-century, in much the same way the Interstate highways did in the 20th century. Once completed with forms of public financing, these systems can be operated and maintained by the private sector and operated at a profit. We can't afford not to build a national high-speed system. It's not the only infrastructure investment needed to secure our economic futures. But it's one that will be essential to our future mobility and competitiveness**.

Investment in HSR will jumpstart the economy and provides the clearest and fastest way to long-term economic growth – studies prove

Williams 11 (Mantil is a Writer and researcher for the APTA, or American Public Transportation Association. The American Public Transportation Association (APTA) is a nonprofit international association of 1,500 public and private member organizations, engaged in the areas of bus, paratransit, light rail, commuter rail, subways, waterborne services, and intercity and high-speed passenger rail "Federal Investment in High-Speed Rail Could Spur 1.3 Million Jobs " http://www.apta.com/mediacenter/pressreleases/2011/Pages/110406_HSR_Business.aspx

The American Public Transportation Association (**APTA) released a report detailing the** enormous **impact high-speed** and intercity passenger **rail projects will have in driving job development, while also rebuilding America's manufacturing sector and generating billions of dollars in business sales**. This report focuses on key issues critical to private investors as they consider investments or future expansion into businesses serving the growing passenger rail markets. The report, "The Case for Business Investment in High-Speed and Intercity Passenger Rail" reinforces the point that **investments in high-speed and intercity rail will have many direct and indirect benefits.** Nationally, due to proposed federal investment of high-speed rail over a six-year period, **investment can result in supporting and creating more than 1.3 million jobs. This federal investment will be the catalyst for attracting state, local and private capital which will result in the support and creation of even more jobs.** According to this new report, **investments in building a 21st century rail system will not only lead to a large increase in construction jobs, but to the sustainable, long-term growth of new manufacturing and service jobs across the country.** "It is evident that **investing in high-speed and intercity rail projects presents one of the clearest and fastest ways to create green, American jobs and spur long-term economic growth," said APTA President William Millar.** "Investing in high-speed rail is essential for America as we work to build a sustainable, modern transportation system that meets the environmental and energy challenges of the future." APTA noted **for each $1 billion invested in high-speed rail projects, the analysis**

predicts the support and creation of 24,000 jobs. In addition to the thousands of new construction jobs, **investments in high-speed rail will jumpstart the U.S. economy. The Economic Development Research Group for the U.S. Conference of Mayors studied the business impact of high-speed rail investment in different urban regions. For example, in Los Angeles, CA, high-speed rail investment generates $7.6 billion in business sales and $6.1 billion in Chicago, IL. "Federal high-speed rail investment is a strong driver in getting private companies to invest," said Kevin McFall, Senior Vice President at Stacy and Witbeck Inc., a leading public transit construction firm. "This program can be a shot in the arm for the manufacturing industry. These high-speed rail projects will give us the opportunity to put people to work building the rail infrastructure this country desperately needs." "**U.S. businesses have been known for their cutting edge technologies and innovations, said Jeffrey Wharton, President of IMPulse NC. "We need to put this expertise to work, providing business and employment opportunities while catching up with the rest of the world in high-speed rail and its associated benefits." "We are excited about the prospect of putting Americans to work building the rail tracks and equipment that will keep America's economic recovery moving forward," said Charles Wochele, Vice President for Industry and Government Relations at Alstom Transport. "We look forward to partnering with the federal and state governments to ensure these projects get off the ground."

Economic decline increases the risk of war—statistically proven.

Royal 10 — Jedidiah Royal, Director of Cooperative Threat Reduction at the U.S. Department of Defense, M.Phil. Candidate at the University of New South Wales, 2010 ("Economic Integration, Economic Signalling and the Problem of Economic Crises," Economics of War and Peace: Economic, Legal and Political Perspectives, Edited by Ben Goldsmith and Jurgen Brauer, Published by Emerald Group Publishing, ISBN 0857240048, p. 213-215)

Less intuitive is how **periods of economic decline may increase the likelihood of external conflict**. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson's (1996) work on leadership cycle theory, finding that **rhythms in the global economy are associated with the rise and fall of a pre-eminent power and the often bloody transition from one** pre-eminent leader **to the next**. As such, exogenous shocks such as **economic crises** could **usher in a redistribution of relative power** (see also Gilpin. 1981) **that leads to uncertainty** about power balances, **increasing the risk of miscalculation** (Feaver, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner. 1999). Separately, Pollins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland's (1996, 2000) theory of trade expectations suggests that 'future expectation of trade' is a significant variable in understanding economic conditions and security behaviour of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However, if the expectations of future trade decline, particularly for difficult [end page 213] to replace items such as energy resources**, the likelihood for conflict increases, as states will be inclined to use force to gain access to** those **resources. Crises could** potentially be the **trigger** for **decreased trade expectations** either on its own or because it triggers protectionist moves by interdependent states.4 Third, others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict, particularly during periods of economic downturn. They write, The **linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour.** Moreover, **the presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other.** (Blomberg & Hess, 2002. p. 89) **Economic decline has** also **been linked with an increase in** the likelihood of **terrorism** (Blomberg, Hess, & Weerapana, 2004), **which has the capacity to spill across borders and lead to external tensions.** Furthermore, **crises** generally **reduce the popularity of** a sitting **government**. "Diversionary theory" suggests that, when **facing unpopularity arising from economic decline,** sitting **governments have increased incentives to fabricate external military conflicts to create a 'rally around the flag' effect.** Wang (1996), DeRouen (1995). and Blomberg, Hess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic

leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that **periods of weak economic performance in the United States**, and thus weak Presidential popularity, **are statistically linked to an increase in the use of force.** In summary, recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas **political science scholarship links economic decline with external conflict at systemic, dyadic and national levels.**5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic-security debate and deserves more attention. **This** observation **is not contradictory to other perspectives that link economic interdependence with a decrease in** the likelihood of external **conflict**, such as those mentioned in the first paragraph of this chapter. [end page 214] Those studies tend to focus on dyadic interdependence instead of global interdependence and **do not specifically consider** the occurrence of and conditions created by **economic crises.** As such, the view presented here should be considered ancillary to those views

HSR has significant economic benefits and a direct correlation with GDP – first thorough statistical study proves

Ahlfeldt 10 (Gabriel M Ahlfeldt, the Department of Geography and Environment at LSE, "New research shows that high-speed rail does deliver economic growth", The London School of Economics and Political Science, http://www2.lse.ac.uk/newsAndMedia/news/archives/2010/09/highspeedrail.aspx

High-speed rail lines bring clear and significant economic benefits to the communities they serve, the first thorough statistical study of the subject has discovered. Economists discovered that towns connected to a new high-speed line saw their GDP rise by at least 2.7 per cent compared to neighbours not on the route. Their study also found that increased market access through high-speed rail has a direct correlation with a rise in GDP – for each one per cent increase in market access, there is a 0.25 per cent rise in GDP. The findings, from the London School of Economics and Political Science and the University of Hamburg, may be used to support arguments for high-speed networks which are already being planned in the UK, US and across the world. Until now, no one has demonstrated that high-speed rail brings clear economic gains along its routes.

Authors Gabriel Ahlfeld and Arne Feddersen presented their findings at the conference of the German Economic Association. The paper, From Periphery to Core: economic adjustments to high-speed rail, also points to advantages in employment and GDP per capita for towns on the high-speed network. **Their research focused on the line between Cologne and Frankfurt,** which opened in 2002 and runs trains at almost 185mph (300 kmh). The authors looked at the prosperity and growth of two towns with stations on the new line – Limburg and Montabaur – and compared them with more than 3,000 other municipalities in the surrounding regions. The new line brought Limburg and Montabaur within a 40-minute journey of both Cologne and Frankfurt. **Over a four-year period, the researchers found that both towns and the area immediately around them saw their economies grow by at least 2.7 per cent more than their unconnected neighbours. This effect, say the authors, is entirely attributable to the improved access to markets for Limburg and Montabaur and not to any external factors or inherent growth. They chose the two towns for the study because both were included on the high-speed route due to lobbying by regional government and not because their economies were powerful or expanding.** Dr Ahlfeldt, from the Department of Geography and Environment at LSE, said: 'One of the problems with identifying the impact of high-speed rail has been that lines tend to get built first between areas with strong and growing economies so that it's difficult for economists to be sure which effects are attributable to the new rail line and which to existing factors. **But because there was no economic rationale for building the line to Limburg and Montabaur, they provided the perfect "laboratory" conditions for us to measure the effect of high-speed trains. 'It is quite clear that the line itself brought significant and lasting benefits in access to markets, growth, employment and individual prosperity.** One of our key findings is a positive market access elasticity, which means that improvements in accessibility to other towns, cities and regions, will be reflected in economic growth. We believe this research develops a new framework for predicting the economic effects of large-scale infrastructure projects and will help governments to define future spending priorities.'

Advantage Two – Energy Transition

Oil accounts for half of total US energy needs, including 94% of transportation. Despite gross decline in consumption, costs have increased, making the US vulnerable to shocks.

Nerurkar, specialist in energy policy, Council on Foreign Relations, April 4, **2012** (Neelesh, "CRS: US Oil Imports and Exports," http://www.cfr.org/us-strategy-and-politics/crs-us-oil-imports-exports/p27891)

Oil is a critical resource for the U.S. economy. It **meets nearly 40% of total U.S. energy needs, including 94% of the energy used in transportation and 40% of the energy used by the industrial sector**.1 Unlike other forms of energy such as coal and natural gas, which are largely supplied from domestic sources, **net imports from foreign sources meet 45% of U.S. oil consumption, and thus the basis of** many of **the nation's energy security concerns.**The United States has been concerned about dependence on foreign oil since it became a net oil importer in the late 1940s. Those **concerns grew with import levels**, especially in periods of high or rising oil prices. Nonetheless, **imports have generally increased over the last six decades**, except for a period following the oil spikes of the 1970s and again in the last six years. **Net oil import volumes** and share of consumption **peaked in 2005 and then declined through 2011** as a result of economic and policy-driven changes in domestic supply and demand. **However, oil total** (or aggregate) **import costs have increased due to rising prices, which** more than **offset the savings from lower import volumes.**Net imports are gross imports minus exports (it is also the difference between domestic demand and supply). **Interest in oil imports has climbed** again **as oil prices rebounded in response to global economic recovery** in 2009-2010 **and unrest in the Middle East and North Africa** in 2011 (Libya, Egypt) and 2012 (tensions with Iran). Attention to oil exports grew in 2011, when the United States became a net exporter of petroleum products at a time when petroleum product prices were rising. Though it remains a large net importer of oil due to the need for crude oil from abroad, the United States recently started exporting more petroleum products than it imports.

Oil dependence risks catastrophic wars and economic collapse. Alternative energy technologies are yet to be cost-competitive, making high-speed rail the key to the energy transition

Anthony **Perl**, Prof. of Urban Studies @ Simon Fraser University, 11/19/20**11** (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**.

HSR is the single most powerful thing we can do to get the U.S. off oil – combination of renewable sources can be used for power

USHSR NO DATE (The US High Speed Rail Association is the leading company in the study of HSR. "Energy Security" http://www.ushsr.com/benefits/energysecurity.html)

Building an electrically-powered national high speed rail network across America is the single most powerful thing we can do to get the nation off oil and into a secure, sustainable form of mobility. A national network of **high speed trains can be powered by a combination of renewable energy sources** including **wind, solar, geothermal, and ocean/tidal energy. America's dependency on oil is the most severe in the world, and inevitably pulls us into costly resource wars**. It also pushes us into exploring for oil in extreme locations such as 10,000 feet deep below the Gulf of Mexico. We use 25% of the entire world's oil supply, yet we only have 5% of the world's population. We use 8-10 times more oil per person per day than Europeans, and they have faster, easier and better mobility than we do. The extremely high daily oil consumption of Americans is not due to a higher standard of living, but because of the extremely inefficient nature of our national transportation system – based on individual vehicles powered by internal combustion engines, combined with our sprawling community designs that force people into cars for every trip.

U.S. Oil dependence leads to unending resource wars, the impact is extinction

Heinberg, Professor @ New College, recipient of M.K. Hubbert Award for Energy Excellence Education & Senior Fellow at Post-Carbon Institute, 20**03** (Richard, The Party's Over: Oil, War, and the Fate of Industrial Societies, 2003, p. 230)

Today the average US citizen uses five times as much energy as the world average. Even citizens of nations that export oil – such as Venezuela and Iran – use only a small fraction of the energy US citizens use per capita. **The Carter Doctrine**, declared in 1980, **made it plain that US military might would be applied to the project of dominating the world's oil wealth:** henceforth**, any hostile effort to impede the flow of Persian Gulf oil would be regarded as an "assault on the vital interests of the United States" and would be "repelled by any means necessary, including military force.**" In the past 60 years, the US military and intelligence services have grown to become bureaucracies of unrivaled scope, power, and durability. **While the US has not declared war on any nation since 1945, it has** nevertheless **bombed or invaded a total of 19 countries and stationed troops**, or engaged in direct or indirect military action, **in dozens of others.** During the Cold War, the US military apparatus grew exponentially, ostensibly in response to the threat posed by an archrival: the Soviet Union. But **after the end of the Cold War the American military and intelligence establishments did not shrink in scale** to any appreciable degree. **Rather, their implicit agenda — the protection of global resource interests emerged as the semi-explicit justification for their continued existence. With resource hegemony came challenges from nations or sub-national groups opposing that hegemony.** But **the immensity of US military might ensured** that such **challenges would be** overwhelmingly **asymmetrical. US strategists labeled such challenges "terrorism" — a term** with a definition **malleable enough to be applicable to any threat** from any potential enemy, foreign or domestic, while never referring to any violent action on the part of the US, its agents, or its allies. **This policy puts**

the US on a collision course with the rest of the world. If all-out competition is pursued with the available weapons of awesome power, the result could be the destruction not just of industrial civilization, but of humanity and most of the biosphere.

HSR reduces CO2 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 **Penn**sylvania (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.

Transportation is one of the few sectors where Co2 emissions are still growing. Mode shift from fossil-fuel based transportation options key to avert global warming

CHAPMAN 07 (Professor - School of Geography, Earth and Environmental Science, University of Birmingham, UK Lee Chapman, Transport and climate change: a review, Journal of Transport Geography, Volume 15, Issue 5, September 2007, Pages 354–367)

Climate change Natural forces ensure that the Earth has experienced a changing climate since the beginning of time. However, during the last century, anthropogenic (human) activity has threatened significant climate change over a relatively short time period (Karl and Trenberth, 2003). The term 'global warming' is well documented and refers to the measured increase in the Earth's average temperature. This is caused by the build-up of key greenhouse gases in the atmosphere accumulated from continual combustion of fossil fuels and landuse changes over the 20th century (Weubles and Jain, 2001). **The anthropogenic signal has now become increasingly evident** in the climate record where **the rate and magnitude of warming** due to greenhouse gases **is directly comparable to actual observed increases of temperature** (Watson, 2001). Any change to the composition of the atmosphere requires a new equilibrium to be maintained; a balance ultimately achieved by changes to the global climate. Radiative forcing, the change in the balance between incoming solar radiation and outgoing infrared radiation caused by changes in the composition of the atmosphere, is investigated by using global climate models (GCMs) that represent the interactions of the atmosphere, land-masses, oceans and ice-sheets. By predicting how the global climate will respond to various perturbations, projections can be made to determine how global climate will change under different conditions. Under the six illustrative emission scenarios used by the IPCC (Intergovernmental Panel on Climate Change), CO2 levels are predicted to increase over the next century from 369 parts per million, to between 540 and 970 parts per million (Nakicenovic and Swart, 2000). This translates to an increase in globally averaged temperatures of between 1.4 and 5.8 °C (Watson, 2001), in turn leading to an increase in extreme weather events and a rise in sea levels. However, predictions made with GCMs need to be viewed with caution (Lindzens, 1990), as they are an oversimplification of what is a complicated and dynamic system. Indeed, the large number of emission scenarios considered

underlines the uncertainty in making predictions so far into the future as it is unclear as to what extent technological and behavioural change will help the situation. Nevertheless, **the growth in CO2 emissions is unsustainable and will soon exceed the level required for** stabilisation (currently estimated to be in the region of 400–450 parts per million; Bristow et al., 2004). Furthermore, the radiative forcing experienced from CO2 today is a result of emissions during the last 100 years (Penner et al., 1999). It is this inertia that means that some impacts of anthropogenic climate change may yet remain undetected and will ensure that global warming will continue for decades after stabilisation. 1.2. The role of transport **Oil is the dominant fuel source for transportation** (Fig. 1a) with road transport accounting for 81% of total energy use by the transport sector (Fig. 1b). This **dependence on fossil fuels makes transport a major contributor of greenhouse gases and is one of the few industrial sectors where emissions are still growing** (WBCSD, 2001). The impact of transport on the global climate is not limited to vehicle emissions as **the production and distribution of fuel from oil,** a 'wells to wheels' approach, **produces significant amounts of greenhouse gas in itself** ([Weiss et al., 2000], [Mizsey and Newson, 2001] and [Johannsson, 2003]). For example, consideration of total CO2 emissions from an average car showed that 76% were from fuel usage where as 9% was from manufacturing of the vehicle and a further 15% was from emissions and losses in the fuel supply system (Potter, 2003). Transport was one of the key sectors highlighted to be tackled by the 1997 Kyoto protocol. The aim was to reduce worldwide greenhouse gas emissions by 5.2% of 1990 levels by 2012. Therefore, since 1997, transport has featured heavily in the political agendas of the 38 developed countries who signed the agreement. Fig. 2a shows that **the transport sector accounts for 26% of global CO2 emissions** (IEA, 2000), of which roughly two-thirds originates in the wealthier 10% of countries (Lenzen et al., 2003). Road transport is the biggest producer of greenhouse gases in the transport sector, although the motor car is not solely responsible for all these emissions (Fig. 2b). Buses, taxis and inter-city coaches all play a significant role, but the major contributor is road freight which typically accounts for just under half of the road transport total. **Away from road transport, the biggest contributor to climate change is aviation. Aviation is much more environmentally damaging than is indicated solely by CO2 emission figures. This is due to other greenhouse gases being released directly into the upper atmosphere, where the localised effects can be more damaging** then the effects of CO2 alone (Cairns and Newson, 2006). Although, the actual energy consumption and CO2 emissions from aviation appear relatively low when compared to the motor car (Fig. 2b, Table 1), **it is the projected expansion in aviation which is the biggest concern. Air transport shows the highest growth amongst all transport modes** (Lenzen et al., 2003) and is predicted to be as high as 5% per annum for the next decade (Somerville, 2003). All **transport sectors** are experiencing expansion (Table 1 and Table 2) and unfortunately there is a general trend that the modes **which are experiencing the most growth, are also the most polluting.** Fig. 3a shows a breakdown of CO2 emissions per passenger kilometre. Aviation and motor cars are increasingly the favoured modes for passenger transport, but are also significantly the most damaging. A similar picture is shown for freight in Fig. 3b where again, aviation and road freight are both the sectors with the biggest growth and highest CO2 emissions. Hence, **there is a need to break the relationship between the current preferred movements of passengers and freight with the most polluting modes.** Either the favoured modes need to be made less polluting through technological change or **alternative modes need to be made more attractive via behavioural change driven by policy** (DfT, 2005a). Clearly, the biggest challenges are car usage, the rapid expansion of aviation and the increase in road freight ([Lenzen et al., 2003] and [DfT, 2004a]). Hence, this review focuses on the impact of growth in car use, aviation and freight with respect to climate change inducing greenhouse gas emissions and discusses ways in which society can adapt to reduce the impacts.

Warming causes extinction

Tickell 08 [Oliver Tickell, Climate Researcher, "On a planet 4C hotter, all we can prepare for is extinction," hwww.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.

Plan

The United States Federal Government should create a dedicated budget allocation to fund the completion of a nation-wide high-speed rail network. Funding and implementation through normal means. We'll clarify.

Solvency

Federal funding creates stable expectations, attracting needed investor confidence for rail equipment while equitable federal to state funding can overcome imbalanced federal allocation standards

Ridlington & Kerth et al, 2010 [policy analysts with the Frontier Group, environmental think take in affiliation with the Public Interest Network, Fall Wisconsin Public Interest Research Group – Elizabeth & Rob, Brian Imus [Illinois PIRG Education Fund & Bruce Speight, WISPIRG Foundation "Connecting the Midwest, - How a Faster Passenger Rail Network Could Speed Travel and Boost the Economy,"

The **federal government will necessarily be the largest source of financing for high-speed rail construction.** In filling that role, **federal policymakers should aim to bind state and regional projects together as pieces of a national vision for transportation, and** also take advantage of their position to **ensure** that **investments** in high-speed rail **result in the highest quality system possible**. Midwestern lead- ers—whether at the state level, or as mem- bers of Congress—should push the federal government to hold to these principles, and where appropriate commit their own states to corresponding actions. **America's** passenger **rail system is in its current sorry shape** largely **because of the failure to adequately invest in maintaining and upgrading the system** over the last half century. During a postwar period in which America built tens of thousands of miles of gleaming new expressways and hundreds of airports, **our rail system was allowed to deteriorate such that** today, at the beginning of the 21st century, **we still rely**, in some places, **on infrastructure dating from before the Civil War. Trips can take far longer** today **than** they did **in the past**; in 1950 travelers from Chicago to Minneapolis would arrive in four hours aboard the Olympian Hiawatha, but today the same trip takes eight and a half hours on Amtrak's Empire Builder.136 **The worst, most costly mistake Amer- ica can make** going into the 21st century **is to not invest adequate resources in upgrading and expanding our passenger rail network. Failing to invest will necessitate** even **greater spending on highways and airports, deepen our costly dependence on foreign oil,** and **forestall** the **economic growth** that can result **from improved connections among people, businesses and institutions**. The first step in determining an adequate level of investment is to recognize that America is digging out of a very deep hole when it comes to our nation's rail infrastructure. If the federal government had invested the same amount of money over the last half-century in rail as it had in aviation, roughly $400 billion worth of upgrades would have been possible. That amount of money would have been more than enough to build a high-speed rail network worthy of the world's most economically advanced nation. **To begin to dig out of that hole, the federal government should invest steadily increasing levels of funding in passenger rail.** We probably cannot hope to match the $300 billion China will be investing in its high-speed rail system between now and 2020, but **we should endeavor to match the level of investment** provided **by other industrialized nations, as a share of GDP**, in their rail networks. To prompt that com- mitment, meanwhile, states should demon- strate a willingness to fund rail operations within their borders at an appropriate level, recognizing that the economic benefits of doing so well outweigh the costs. Currently, **America's public investment in inter-city rail is far lower than** that of **other industrialized countries. Even with the** unprecedented **investments in passenger rail included in the A**merican **R**ecovery and **R**einvestment **A**ct, the **U.S.** government **investment in the national rail system is far below** that of **many Euro- pean countries** per capita and as a share of GDP. (See Figure 5.) These figures do not include investments made by private U.S. freight railroads, but in any case, **to create a truly world-class passenger rail system, the United States will need to invest far more than it has historically. As important as the lack of funding has been the instability of funding for passenger rail** in the United States, **which has made it difficult to undertake long-term capital planning and** to **build** the **investor confidence necessary to establish vibrant domestic industries to supply rail equipment. To ensure stable, continuing funding for high-speed rail, the next federal** trans- portation **bill should include a dedicated allocation of funds for passenger rail and the federal government should match state investments in rail at no less than the same 80:20 ratio it does for highways. By financ- ing transportation projects equitably, states will be able to make rational transportation decisions based on the needs of their resi- dents, rather than on** the **chances of secur- ing a**

lucrative federal match. State leaders need to recognize the perverse effects that existing imbalances in federal allocations have had, and advocate for funding mecha- nisms that will allow their states to weigh costs and benefits evenhandedly. **Funding could come from a variety of sources, including a national infrastructure bank, "value capture" mechanisms to share windfalls from increased land values near rail stations, revenues from cap-and-trade programs for carbon dioxide emissions, air- port surcharges, or an enhanced highway trust fund augmented through higher fuel taxes or vehicle mileage fees.**

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 20**11** 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).

Economy ADV

Economy UQ

U.S. economy is stalling – unemployment is rising again and comes at a precarious time for the global economy

Bloomberg 6-1-12-(Christopher S. Rugaber, "US economy added 69K jobs in May, fewest in a year", Bloomberg Businessweek, June 1, 2012, http://www.businessweek.com/ap/2012-06/D9V4CNRO0.htm)

The U.S. economy suddenly looks a lot weaker. U.S. **employers created only 69,000 jobs in May, the fewest in a year, and the unemployment rate ticked up. The dismal jobs data will fan fears that the economy is sputtering.** It could also damage President Barack Obama's re-election prospects. And it could lead the Federal Reserve to take further steps to help the economy. The Labor Department also said Friday that **the economy created far fewer jobs in the previous two months than first thought.** It revised those figures down to show **49,000 fewer jobs created. The unemployment rate rose to 8.2 percent** from 8.1 percent in April, **the first increase in 11 months**. The **Dow Jones** industrial **average fell more than 160 points in the first half hour of trading. The yield on the benchmark on the 10-year Treasury note plunged to 1.46 percent, the lowest on record.** It suggested that investors are flocking to the safety of U.S. government bonds. The price of gold, which was trading at about $1,550 an ounce before the report, shot up $30. Investors have seen gold as a safe place to put their money during turbulent economic times. Josh Feinman, global chief economist with DB Advisors, said Friday's report raises the likelihood that the Federal Reserve will do more -- perhaps start another round of bond purchases to further lower long-term interest rates. Still, he noted that the rate on 10-year Treasury notes is already at a record low 1.46 percent. "How much lower can long-term rates go?" Feinman said. The economy is averaging just 73,000 jobs a month over the past two months -- roughly a third of 226,000 jobs created per month in the January-March quarter. **Slower growth in the United States comes at a perilous time for the global economy.**

Competitiveness internals

HSR is critical to reviving our competitiveness and pulling ourselves out of the current downturn

American Public Transportation Association, '12 – non-profit that advocates for the advancement of public transportation programs in the U.S. ("An Inventory of the Criticisms of High-Speed Rail: with Suggested Responses and Counterpoints," January 2012, p. 24, http://www.apta.com/resources/reportsandpublications/Documents/HSR-Defense.pdf)

The intercity passenger and high-speed rail initiative was launched (by Republicans) for specifically the reasons cited by the current administration. **America is growing increasingly uncompetitive with the rest of the developed (and in many cases even the developing) world. We will only pull ourselves out of the current situation by creating the means to make our nation more competitive. High-speed rail and the renewal of the nation's rail networks are just the kinds of infrastructure projects required of these times and circumstances. The only things gained by waiting are all the bad things this initiative is designed and intended to address, not the least of which is the cost of waiting. Can you imagine what would have happened if President Eisenhower had waited for a "better time" to begin building the nation's interstate highway system?**

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 U**nited **S**tates? 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 key to maintaining global economic competitiveness – acting now is key to avoiding higher costs down the line

Stern 5/14 (Rachel, Junior fellow at the society of fellows at Harvard University, "High-Speed Rail Key to Job Creation, Supporters Say in Rally", http://santacruz.patch.com/articles/high-speed-rail-key-to-job-creation-supporters-say-in-rally-9b0983f0

Still, "**there are far more risks to not moving forward**," said Daniel Krause, the co-founder and executive director of Californians for High-Speed Rail at the rally. "**It will cost much more to expand airports and freeways to create the same amount of transportation capacity**," said Krause, who pointed out that the project would in turn **also lead to higher air pollution and risk of automotive deaths**. The borrowing costs of the project, he continued, would be offset with the requirement than any of Prop 1A used must be matched with a non-state source of funds, "injecting billions of dollars into our state's economy." The project's supporters include San Jose Mayor Chuck Reed and San Francisco Mayor Ed Lee, who has stated that the project is necessary "**to maintain our global economic competitiveness.**" San Francisco International Airport also counts itself as a project supporter, said Airport Director John Martin in a statement he issued earlier. "Passenger traffic at SFO is expected to grow to 50 million passengers by 2025," he said. "**High-speed rail will reduce the need for short-haul commuter flights and provide greater ability for SFO to accommodate international and long-haul domestic flights."** Now is the time to act on the rail before costs become higher, said Vance Pope a construction operating engineer from Redwood City, after the rally. "**The longer you wait,**" he said, "**the more it's gonna cost so you might as well get it done." "The High-Speed Rail would create a lot of jobs** for our members," said Alfredo Quintana, a Milpitas construction worker from Laborers Local 270.

Jobs internals

HSR will provide a major stimulus to the California economy – 160,000 jobs and $48 billion per year in taxable income

Kantor, 2008 – Ph.D. from California Institute of Technology, Professor of Economics at the University of California, Research Associate at the National Bureau of Economic Research (Shawn, "The Economic Impact of the California High-Speed Rail in the Sacramento/Central Valley Area" September 2008, www.sjvpartnership.org%2Fuploaded_files%2FWG_doc%2FHSR_ Central Valley _Presentation.pdf&ei=ZV_jT6fwE4Gi8QSL49SGCA&usg=AFQjCNGIWF2b3mq SSaI57frEnll-IDNG7g&sig2=BLkRksZX4B3eZ T ptDJ-9iw

The research suggests that **HSR will have a disproportionately positive impact on areas that are on the economic periphery at the present time**, specifically Merced and 2 Madera Counties. **The research further indicates that HSR will trigger internal job creation within the Central Valley, especially in the service, transportation, communications, and utilities, and finance, insurance, and real estate sectors. Further, job-creation will occur directly as a result of the HSR network construction. With 160,000 construction-related jobs created to plan, design, and then build the HSR system at an approximate cost of $40 billion, the Central Valley economy will experience direct employment and economic multiplier benefits.** It is reasonable to speculate that the Central Valley will receive somewhere between 15 and 40 percent of the overall HSR public expenditure, based on population and track mileage. One of the most important anticipated benefits from HSR is the increased level of accessibility that Central Valley areas will experience. **Lower transportation and transaction costs will encourage new businesses to locate in the Central Valley where favorable costs and public policies can encourage business development**. Workers will be able to seamlessly commute both to, from, and within the Central Valley. **Estimates presented in the report show that the potential taxable income gains to the Central Valley economy from achieving economic integration into and parity with the rest of the state can reach nearly $48 billion per year. This added income would translate into enhanced state income tax revenues of over $2 billion. Furthermore, increased household income translates into greater consumption.** Estimates presented in the report suggest that total sales/use taxes would increase by approximately $333 million per year, of which nearly $46 million would flow directly to counties and cities within the Central Valley.

HSR creates thousands of jobs and fosters new manufacturing industries and large amounts of related employment

Todorovich, Schned, and Lane, 2011 – Director, and associate planner, of America 2050- a national urban planning initiative to develop an infrastructure and growth strategy for the U.S. (Petra, Daniel, and Robert, "High-Speed Rail: International Lessons for U.S. Policy Makers", Policy Focus Report- Lincoln Institute of Land Policy, September 2011, http://www.lincolninst.edu/pubs/dl/1948_1268_High-Speed Rail PFR_Webster.pdf

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 work- ers were involved in building the high-speed rail line that connects Beijing and Shanghai (Bradsher 2010). **Sustained investment could foster the development of new manu- facturing industries for rail cars and other equipment, and generate large amounts of related employment.**

Economy impacts

Economic decline causes war

Mead 9 — Walter Russell Mead, Senior Fellow for U.S. Foreign Policy at the Council on Foreign Relations, 2009 ("Only Makes You Stronger," The New Republic, February 4th, Available Online at http://www.tnr.com/story_print.html?id=571cbbb9-2887-4d81-8542-92e83915f5f8, Accessed 01-25-2009)
None of which means that we can just sit back and enjoy the recession. History may suggest that financial crises actually help capitalist great powers maintain their leads—but it has other, less reassuring messages as well**. If financial crises have been a normal part of life during the 300-year rise of the liberal capitalist system** under the Anglophone powers, **so has war. The wars of the League of Augsburg and the Spanish Succession; the Seven Years War; the American Revolution; the Napoleonic Wars; the two World Wars; the cold war: The list of wars is almost as long as the list of financial crises.¶ Bad economic times can breed wars. Europe was a pretty peaceful place in 1928, but the Depression poisoned German public opinion and helped bring Adolf Hitler to power. If the current crisis turns into a depression, what rough beasts might start slouching toward Moscow, Karachi, Beijing, or New Delhi to be born?¶** The United States may not, yet, decline, but, **if we can't get the world economy back on track, we may still have to fight.**

Economic decline collapses democracy and causes war—empirically proven.

Tilford 8 — Earl Tilford, military historian and fellow for the Middle East and terrorism with The Center for Vision & Values at Grove City College, served as a military officer and analyst for the Air Force and Army for thirty-two years, served as Director of Research at the U.S. Army's Strategic Studies Institute, former Professor of History at Grove City College, holds a Ph.D. in History from George Washington University, 2008 ("Critical Mass: Economic Leadership or Dictatorship," Published by The Center for Vision & Values, October 6th, Available Online at http://www.visionandvalues.org/2008/10/critical-mass-economic-leadership-or-dictatorship/, Accessed 08-23-2011)
Nevertheless, al-Qaeda failed to seriously destabilize the American economic and political systems. **The current economic crisis,** however, **could** foster critical mass not only in the American and world economies but also **put the world democracies in jeopardy.¶** Some experts maintain that a U.S. government economic relief package might lead to socialism. I am not an economist, so I will let that issue sit. However, as a historian I know what happened **when** the European and American **economies collapsed in the** late 1920s and early 19**30s**. The role of **government expanded exponentially** in Europe and the United States. **The Soviet system**, already well entrenched in socialist totalitarianism, **saw Stalin tighten his grip** with the doctrine of "socialism in one country," which allowed him to dispense with political opposition real and imagined. **German economic collapse contributed to the Nazi rise** to power in 1933. The alternatives in the Spanish civil war were between a fascist dictatorship and a communist dictatorship. **Dictatorships** also **proliferated across** Eastern **Europe**.¶ In the United States, the Franklin Roosevelt administration vastly expanded the role and power of government. In Asia, Japanese militarists gained control of the political process and then fed Japan's burgeoning industrial age economy with imperialist lunges into China and Korea; the first steps toward the greatest conflagration in the history of mankind ... so far ... **World War II ultimately resulted**. That's what happened the last time the world came to a situation resembling critical mass. **Scores upon scores of millions of people died.¶** Could it happen again? Bourgeois democracy requires a vibrant capitalist system. Without it, the role of the individual shrinks as government expands. At the very least, the dimensions of the U.S. government economic intervention will foster a growth in bureaucracy to administer the multi-faceted programs necessary for implementation. **Bureaucracies**, once established, **inevitably become self-serving and self-perpetuating**. Will this lead to "socialism" as some conservative economic prognosticators suggest? Perhaps. But so is the possibility of dictatorship. **If the American economy collapses,** especially in wartime, there remains that possibility.

And if that happens **the American democratic era may be over. If the world economies collapse, totalitarianism will** almost certainly **return to Russia**, which already is well along that path in any event. **Fragile democracies in South America and Eastern Europe could crumble.¶** A global **economic collapse will** also **increase the chance of global conflict. As economic systems shut down, so will** the **distribution systems for resources** like petroleum and food. It is certainly within the realm of possibility that **nations perceiving themselves in peril will**, if they have the military capability, **use force, just as Japan and Nazi Germany did in the** mid-to-late 19**30s**. Every nation in the world needs access to food and water. Industrial nations -- the world powers of North America, Europe, and Asia -- need access to energy. When the world economy runs smoothly, reciprocal trade meets these needs. **If the world economy collapses, the use of military force becomes a more likely alternative.** And given the increasingly rapid rate at which world affairs move; **the world could devolve to that point very quickly**

US economy key

U.S. economy key to world economy – recent spillovers prove

Kohn 6/26/**08** (Donald L., PhD – Econ "Global Economic Integration and Decoupling" http://www.federalreserve.gov/newsevents/speech/kohn20080626a.htm

Global Integration through Trade and Finance Undoubtedly, **economies have become more integrated** in recent decades. For example, **U.S. imports** of goods and services **have risen relative to** the U.S. gross domestic product (**GDP**), from 10 percent in the second half of the 1980s to nearly 18 percent today. U.S. **trade** with other industrialized countries **has** more than **doubled** over this same period. Industrialized country trade with emerging market economies has experienced a far more dramatic increase.2 **These increases** in trade **are the** natural **result of various forces**. Transport costs have been a big factor. Air shipping costs have declined over time, although some of this has been eroded recently with greater security costs and the rise in fuel prices. Costs of ocean shipping have come down, due to containerization, bulk shipping, and other efficiencies.3 Policy-induced barriers, such as tariffs and other means of restraining international trade, also have declined, with progress especially marked in developing Asia and in Eastern Europe after the breakup of the Soviet Union. Additionally, information about production opportunities in foreign countries has become easier to attain, promoted in part by immigrants and multinational companies facilitating networking and by the enhanced availability of information through the Internet. These developments have led to expanded trade in traditional manufactured goods, but also have led to an expanded breadth of types of traded goods and especially services. As a consequence of these developments, **internationally integrated production has risen**. From the U.S. perspective, this rise has primarily occurred through growth in the import share of intermediate inputs used across all private industries. In the last decade alone, the imported input share rose from around 8-1/4 percent in 1997 to 10-1/2 percent by 2006. **The international movement of workers leads to macroeconomic consequences**, particularly for smaller developing countries. In 2007, an estimated **$240 billion in remittances went to developing countries**, more than double the flow in 2001. These remittances represent a significant source of developing country income and broaden the scope for cyclical spillovers.4 **Another area of** impressive **growth in international linkages has been in financial services**. We've seen increased cross-listings of stocks and more cross-border ownership and control of **exchanges, banks, and securities settlement systems.** Outside of the United States, in 1997, **15 percent of the assets in private equity portfolios were in foreign equities**. A decade later, **this** share **has risen to 24 percent**. For U.S. investors, the comparable shares grew from 9 percent of total equity portfolios to 19 percent. **Bond portfolios have also become more international**, especially for foreign investors. While financial integration has occurred globally, this growth has been uneven. Integration among industrialized countries, measured by the ratio of the sum of their foreign assets and liabilities to GDP, has tripled since 1990, while an analogous measure for emerging and developing economies has increased only about 50 percent.5 One result of this financial integration is that the **financial channels are growing in importance in the transmission of shocks between economies.6 The extent of this integration has become painfully evident to investors and financial institutions during the current episode of financial turmoil, with the collapse of the subprime mortgage market in the U**nited **S**tates **spreading losses and funding pressures to many corners of the globe. Recent analysis of the** size and sources of **spillovers between the U**nited **S**tates, **the euro area, Japan, and other industrial countries finds a central role for international trade. But spillovers also occur through commodity prices and** through **financial variables such as** short- and long-term interest **rates and equity** prices.7 For example**, when liquidity conditions tighten in one country, globally active banks may attempt to pull liquidity from overseas affiliates, reducing the liquidity consequences at home but simultaneously transmitting the shock abroad**.8 What is particularly interesting is that in some cases, financial linkages might now be more important for transmission than the traditional trade linkages.

U.S. is still the world's largest economy and importer – spillovers are important, especially during market stress

Helbling et al 2007 (*Thomas, advisor in the IMF's Research Department where he focuses on commodity market prospects *Peter Berezin, Ph. D in Economics from the University of Toronto, a Master of Science (Economics) from the London School of Economics and a Bachelor of Arts (Economics) from McMaster University. He has extensive experience in analyzing global economic and financial market trends *Ayhan Kose Ph.D. in Economics, H. B. Tippie College of Business, University of Iowa. *Michael Kumhof, PhD at Stanford in Econ *Doug Laxton, the Head of the Economic Modeling Unit of the IMF's Research Department. *Nikola Spatafora, Senior Economist in the Research Department, Development Macroeconomics Division, of the IMF "Decoupling the Train? Spillovers and Cycles in the Global Economy" http://www.contexto.org/pdfs/FMIecdecouplingUS.pdf

As a starting point**, it is useful to establish** some basic **facts about the** relative **size of the U.S. economy and its linkages with other regions. • The U**nited **S**tates **remains** by far **the** world's **largest economy** (Table 4.1). When measured at PPP exchange rates, **the U.S. economy accounts for** about one-fifth of global GDP. In terms of market exchange rates, it accounts for **slightly less than one-third of global GDP**. These ratios have not changed much in the past three decades. • **The U**nited **S**tates **is the largest importer in the global economy**. It has been importing, on average, about one-fifth of all internationally traded goods since 1970. It is the second largest exporter after the euro area. • In line with the generally rapid growth in intraregional trade, **the share of trade with the U**nited **S**tates **has greatly increased in the Western Hemisphere** region, including in neighboring countries—Canada and Mexico— and some others in Central and South America (Figure 4.2). Compared with the euro area and Japan, **the U**nited **S**tates **has seen a larger increase in trade with emerging market and other developing countries in general**, not just with countries in the Western Hemisphere. **Export exposure to the U**nited **S**tates—the share of exports to the United States as a percent of GDP—**has generally continued to increase**, even for countries where the U.S. share of total exports has declined, as trade openness has increased everywhere (Table 4.2). Export exposure to the United States also tends to be larger than that to the euro area and Japan, except in neighboring regions. • Overall, **U.S. financial markets** have been and **remain** by far **the largest, reflecting** not only **the size of the economy** but also their depth. Changes in U.S. asset prices tend to have strong signaling effects worldwide, and **spillovers from U.S. financial markets have been important, especially during** periods of **market stress**. In particular, correlations across national stock markets are highest when the U.S. stock market is declining (Box 4.1). • Reflecting the size and depth of its financial markets, as well as its increasing net external liabilities, **claims on the U**nited **S**tates **typically account for the lion's share of extra-regional foreign portfolio assets of the rest of the world** (Table 4.3). At the same time, **the share of foreign portfolio liabilities held by U.S. investors typically also exceeds the holdings of investors elsewhere, except for the euro area, where intraregional holdings are more important**. This illustrates the extent of important international financial linkages with U.S. markets.

Energy ADV

2ac Iran ADD-on

Specifically, Oil dependence exacerbates energy driven crisis with Iran, makes conflict inevitable

Klare, professor of peace and world security studies at Hampshire College, May 10, **2012** [Michael, "Tomgram: Michael Klare, Oil Wars on the Horizon," http://www.tomdispatch.com/blog/175540/tomgram%3A_michael_klare%2C_oil_wars_on_the_horizon, U.S. forces mobilize for war with Iran: Throughout the winter and early spring, **it appeared that an armed clash of some sort pitting Iran against** Israel and/or **the United States was almost inevitable**. Neither side seemed prepared to back down on key demands, especially on Iran's nuclear program, and any talk of a compromise solution was deemed unrealistic. **Today**, however, **the risk of war has diminished somewhat** -- at least through this election year in the U.S. -- as talks have finally gotten under way between the major powers and Iran, and as both have adopted (slightly) more accommodating stances. In addition, U.S. officials have been tamping down war talk and figures in the Israeli military and intelligence communities have spoken out against rash military actions**. However, the Iranians continue to enrich uranium, and leaders on all sides say they are fully prepared to employ force if the peace talks fail.For the Iranians, this means blocking the Strait of Hormuz, the narrow channel through which one-third of the world's tradable oil passes every day. The U.S**., for its part, **has insisted** that **it will keep the Strait open and, if necessary, eliminate Iranian nuclear capabilities.** Whether to intimidate Iran, prepare for the real thing, or possibly both, **the U.S. has been building up its military capabilities in the Persian Gulf area, deploying two aircraft carrier battle groups** in the neighborhood **along with** an assortment of **air and amphibious-assault capabilities.**One can debate the extent to which Washington's long-running feud with Iran is driven by oil, but **there is no question** that **the current crisis bears heavily on global oil supply prospects,** both **through Iran's threats to close the Strait** of Hormuz **in retaliation for forthcoming sanctions on Iranian oil exports, and the likelihood** that any **air strikes on Iranian nuclear facilities will lead to the same thing.** Either way, **the U.S. military would undoubtedly assume the lead role in destroying Iranian military capabilities and restoring oil traffic through the Strait of Hormuz. This is the energy-driven crisis that just won't go away.**

US involvement in an Iran war causes extinction

Hirsch, prof of physics @ the University of Califorina at San Diego, April 10, **2008** (Seymour Hirsch, "Nuking Iran," http://www.globalresearch.ca/index.php?context=viewArticle&code=HIR20060422&articleId=231 JH: **Iran is likely to respond to any US attack using its considerable missile arsenal against US forces in Iraq and elsewhere in the Persian Gulf.** Israel may attempt to stay out of the conflict, it is not clear whether Iran would target Israel in a retaliatory strike but it is certainly possible**. If the US attack includes nuclear weapons use against Iranian facilities**, as I believe is very likely**, rather than deterring Iran it will cause a much more violent response.** Iranian military forces and militias are likely to storm into southern Iraq and the US may be forced to use nuclear weapons against them, causing large scale casualties and inflaming the Muslim world. There could be popular uprisings in other countries in the region like Pakistan, and of course a Shiite uprising in Iraq against American occupiers. Finally I would like to discuss the grave consequences to America and the world if the US uses nuclear weapons against Iran. First, **the likelihood of terrorist attacks** against Americans both on American soil and abroad **will be enormously enhanced** after these events. And terrorist's attempts to get hold of "loose nukes" and use them against Americans will be enormously incentivized after the US used nuclear weapons against Iran. Second, it will destroy America's position as the leader of the free world. The rest of the world rightly recognizes that nuclear weapons are qualitatively different from all other weapons, and that there is no sharp distinction between small and large nuclear weapons, or between nuclear weapons targeting facilities versus those targeting armies or civilians. It will not condone the breaking of the nuclear taboo in an unprovoked war of aggression against a non-nuclear country, and the US will become a pariah state. Third, **the Nuclear Non-Proliferation Treaty will cease to exist, and many of its** 182 non-nuclear-weapon-country **signatories will strive to acquire nuclear weapons as a deterrent** to an attack by a nuclear nation. **With no longer a taboo against the use of nuclear weapons, any regional conflict**

may go nuclear and expand into global nuclear war. Nuclear weapons are million-fold more powerful than any other weapon, and the **existing nuclear arsenals can obliterate humanity many times over.** In the past, global conflicts terminated when one side prevailed. **In the next global conflict we will all be gone before anybody has prevailed.**

Oil dependence internals

HSR key to transition away from oil; fills in void in alternative energy tech

Christopher **Mahoney**, Railway,net, Nov. 20, **2011** "High-Speed Rail's Environmental Impact" http://www.railroad.net/high-speed-rails-environmental-impact-394.html

A recent article by CNN asked experts to discuss the positive and possible negative impacts that high-speed rail will have in the near future. **According to Dr. Anthony Perl, a professor of urban studies and political science, the fact that high-speed rail does not use fossil fuels is the most important aspect of its environmental impact.** With most of the world dependent on a limited resource, Perl believes **that "high-speed rail offers a proven means of reducing dependence on this increasingly problematic energy source." Perl continues to point** out **that alternative energy technologies are slow to develop, but high-speed rail is technology widely available today**. ¶ On the opposite side of the debate, transportation expert Richard Gilbert argues that the green benefits of high-speed rail are mitigated by energy grids still powered by fossil fuels. From that perspective, Gilbert believes in some situations high-speed rail could cause more environmental harm than good and that a notable environmental impact would be better found by creating grid-connected traction on a global scale. The point was also made that unless a significant amount of passengers switch to high-speed rail and abandon automobiles, the reduction in carbon footprint will be minimal.¶ Its very interesting to read about the environmental aspects of high-speed rail**. High-speed rail will always be a more efficient form of travel than air planes and automobiles,** but it seems that with today's technology and reliance on fossil fuels, high-speed rail actually isn't as green as it could be**. Once the world's energy grids can incorporate more sources of alternative energy, high-speed rail's carbon footprint will greatly decrease**, but until then, the limitations of technology should not penalize high-speed rail today. **Investment in high-speed rail today is in the best interest of the world's transportation needs and its also hard to deny that the environmental aspects of high-speed rail have important implications in the world's future.**

A new and improved rail system built around electric fuel efficiency massively increases passenger demand, offsetting oil dependence from key transportation sectors

Ridlington & Kerth et al, policy analysts w/ the Frontier Group, environmental think tank in affiliation with the Public Interest Network, Fall **2010** [Wisconsin Public Interest Research Group – Elizabeth & Rob, Brian Imus & Bruce Speight, WISPIRG Foundation "Connecting the Midwest, - How a Faster Passenger Rail Network Could Speed Travel and Boost the Economy,"

Cars and airplanes are almost exclusively powered by oil—increasing America's de- pendence on a limited supply of fossil fuel largely controlled by other nations. Spikes in oil prices in recent years have had dra- matic affects on Americans' willingness to drive or fly to their destinations. **Expand- ing and improving passenger rail service can reduce the nation's dependence on oil and insulate travelers from the impact of fuel price spikes**. **Intercity passenger rail—**even when powered by diesel-electric locomotives**—is more fuel-efficient than car or air travel**, particularly for trips in the 100 to 500-mile range. On average, an **Amtrak passenger uses 30 percent less energy per mile than a car passenger**, and 34 percent less than a passenger in an SUV or pickup truck.19 In Europe, high speed trains consume ap- proximately one-third the amount of fuel per passenger as airplanes.20 Fuel use per passenger for trains and airplanes depends on how full the vehicle is. The figures here are based on historic ridership rates; higher ridership would result in lower per-pas- senger energy use.These numbers underestimate rail's oil savings compared with airplanes. **Rail is most competitive against oil-intensive short airplane flights with trip distances of 500 miles or less—a traveler is much more likely to choose rail over air travel** from Chicago to Minneapolis than from Chicago to Miami. (For instance, trains capture 99 percent of the air/rail share of travel between Chicago and Milwaukee.21) **Short flights use more fuel per mile than longer flights**, since a plane uses much of its fuel in takeoff**. A modernized passenger rail network** in the future **will** also **likely use less oil than American passenger rail service does today**. The Midwest High Speed Rail Association estimates that **a Midwestern rail network would reduce dependence on oil by 40 million barrels annually**, or the amount of oil consumed **by 2.9 million cars in a year.**22 Moreover, **a** Midwestern **rail**

system will save even more oil in coming decades **as** **targeted portions of the network are converted to carry electric-powered trains**. Currently, about 40 percent of American intercity passenger rail is pow- ered by electricity, while 80 percent of European rail service is electric.23 **As** the Midwestern **rail system develops**, **plans call for electrifying key segments of the track**, such as the proposed 220 mph route between Chicago and St. Louis.24 **As train service becomes faster**, more reliable and more frequent **it will also** **draw more passengers**, **further lowering per-passenger fuel usage**. The more seats on a train are filled, the less fuel is used per passenger. Amtrak trains are typically about 50 percent full, compared with 70 percent for European high-speed trains.25 As rail travel in America is improved and draws more passengers, it is likely they will be carrying larger loads of travelers, **raising the fuel efficiency of a trip on a train**. Finally, **the location of passenger rail hubs in downtown areas** **can encourage** and support **land-use patterns that reduce the need to drive**, **further curbing oil use**. In Chicago, Milwaukee, St. Louis, India- napolis, and elsewhere, **train stations are centrally located near downtown busi- ness districts**. **A** passenger **rail station in a downtown area** **provides an inducement for businesses to locate nearby**—just as airports spur development of office parks for businesses seeking close proximity to transportation and the construction of hotels and other traveler services.

Transportation key solve warming

Transportation sector is uniquely key to reducing warming

Jehanno 11 (Aurélie, works at Deutsche Bahn Environment Centre, for University of Chicago, High Speed and Sustainable Development Departments, "High Speed Rail & Sustainability", November 2011, http://uic.org/IMG/pdf/hsr_sustainability_main_study_final.pdf

4.1.1 Energy consumption and GHG emissions The reality of global warming is commonly admitted among the scientific community. The works of the International Panel on Climate Change (IPCC) are unequivocal on **the question that climate change is happening and that human activities are largely responsible for it. Global warming is a consequence of the well-known Greenhouse Effect, and the non-natural part of it especially is caused mainly by carbon emissions due to human activity. Anthropogenic emissions have been growing continuously** since the 19th century (see Figure 4). The IPCC predicts temperature rises of between 1° and 6° Centigrade from current levels by 2100, depending on the levels of future greenhouse gas (GHG) emissions. If the higher estimates are accurate, **there could be catastrophic consequences**, so decisive action is required. The Kyoto Protocol regulates five GHGs beside CO2: methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF6). International efforts are now focused on reducing GHG emissions from the activities of modern society to avoid unprecedented impacts from climate change. In March 2007, as part of a wide-ranging attempt to cut emissions, European heads of state agreed to set legally binding targets to reduce Europe-wide GHG emissions by 20% from 1990 levels by 2020 (increased to 30% with a strong global agreement), (EC, 2010) f . The European Commission has further stated that work must begin immediately on a longer-term target of a 50% cut in global emissions by 2050. **In July 2008, the European Commission published its 'Greening Transport' package** which included a series of proposals **to make the transport sector more environmentally-friendly** and to promote sustainable mobility. Yet **the measures agreed so far are not sufficient to contain the negative environmental effects of transport growth**. Furthermore, there is still no coherent 'roadmap' to reduce emissions from transport. Figure 5 shows total GHG emissions for the EU 27 countries, including international maritime and aviation "bunkers" g , projected on linear trajectory towards 80% and 95% reduction targets, alongside total transport emissions (including bunkers) assuming current trends continue. This shows that if the current growth in transport emissions continues, then **even if all other sectors achieve a 100% reduction, targets for total emissions will be exceeded by transport alone by 2050. Transport has a key role to play within solutions to climate change as current transport structures are responsible for extreme pressures** on energy resources and ecosystems **through** a **high dependence on fossil fuels** (80% of energy consumption is derived from fossil fuels). **Producing 23% of all worldwide CO2 emissions, transport is the second largest source of man-made CO2,** after energy production (see Figure 6). Among all sectors, **the transport sector is the only one in which emissions are continuing to increase in spite of all the technological advances**. Moreover, transport emissions, for instance in Europe, increased by 25% between 1990 and 2010. By contrast emissions from the industrial and energy sectors are falling. 9 **Reducing transport emissions is therefore one of the most crucial steps in combating global warming and securing our future.** In the interests of people and the environment, **the rail sector strongly recommends** that **transport policies in the EU and elsewhere start to make more use of the energy efficiency of railways in order to progress towards the 2020 CO2 reduction targets Railways already offer the most energy efficient performance and are constantly improving in terms of energy use per passenger km** (pkm).

HSR = green shift

High speed rail initiates green mode shift

Jehanno 2011 [Aurélie, project manager at SYSTRA Conseil, "High speed rail and sustainability," International union of railways. November 2011]

At the same time, the transport sector will face many challenges in the future such as demographic development, urbanization, and the scarcity of natural resources, as well as increases in oil and energy prices. Meanwhile, the increase in travel demand could lead to overcrowded airports, delayed flights and congested roads. The urge to fight these challenges is therefore pushing economies toward more efficient, and sustainable, solutions. Rail, and **particularly High Speed Rail (HSR), is an important means to meeting these challenges and contribute to sustainable mobility development. HSR offers tangible advantages over other transport modes such as air, conventional rail and the car for medium to long distance journeys.** Considering the evaluation of the complete life cycle it is in terms of sustainability the most efficient mode of transport. At the same time it combines many of the attributes that we most desire while travelling such as speed, reliability, comfort and safety. **HSR's ability to compete with domestic air travel in terms of time and comfort has made a modal shift possible. By not only encouraging a shift from air but also from traditional road transport for lengthy journeys in either cars or coaches HSR is contributing to congestion reduction and its associated pollution**. By providing a suitable alternative for traditional transport modes travel which is greener and more energy efficient per passenger-kilometre it is contributing to the transport industries' need to reduce carbon emissions. **Furthermore, HSR, which is only operating on the electrified network, is today's only mode of transport that directly benefits from the "greening" of the energy supply sector towards low carbon electricity. Electricity from renewable sources can be HSR's main power supply without the need to develop specific and completely new technologies. Compared to aviation and road transport, which will be highly dependent on fossil fuels for many years**, this is one of the main competitive advantages of HSR. The carbon intensity of HSR can even be further reduced by increasing the share of renewable energies. A background paper to this report clearly shows that HSR is still more environmentally friendly

HSR will lead to investment in environmentally friendly technology and create hundreds of thousands of green collar jobs

APTA (American Public Transportation Association) **2009** – non-profit organization which serves as an advocate for public transportation initiatives in the U.S. ("Getting it Done: Building High-Speed Passenger Rail in America", 2009, www.apta.com/PassengerTransport/PublishingImages/APTAFinalBrochurerev.pdf

Building on the rail renaissance currently underway in America, the U.S. will advance **new express high-speed corridors**, develop existing and emerging regional high-speed corridor services, and upgrade reliability and service on conventional intercity and commuter rail services. This **will yield immediate results and will put the nation on track for high-speed corridor development in the coming decades. Investing in environmentally friendly and energy- efficient high-speed rail will: • Create jobs and boost productivity through highly skilled jobs in the transportation industry, and revitalize domestic industries supplying transportation products and services. Upgrading freight and passenger operations** On newly revitalized tracks, bridges and rights of way **is spurring business productivity along all corridors. Employment growth in a domestic rail industry will be a key component of America's economic future, providing hundreds of thousands of forward-looking, green collar jobs.** • Reduce the nation's dependency on foreign oil while keeping billions of dollars in the U.S. economy; decrease greenhouse gas emissions; help meet national and international climate change goals; and improve air quality. • Mitigate congestion, improve connectivity and provide travel choices. The U.S. population is expected to grow by 50 percent between 2000 and 2050. The population growth is creating mega-regions that will not prosper unless they can be freed from the stranglehold of highway and

airport congestion. At the same time, rural and small urban communities will benefit from the increased transfer points and the feeder services connecting with new high-speed rail corridors.

High speed rail causes shift to investments in sustainable transportation

Jehanno 2011 [Aurélie, project manager at SYSTRA Conseil, "High speed rail and sustainability," International union of railways. November 2011]

Furthermore, HSR, which is only operating on the electrified network, is today's only mode of transport that directly benefits from the "greening" of the energy supply sector towards low carbon electricity. Electricity from renewable sources can be HSR's main power supply without the need to develop specific and completely new technologies. Compared to aviation and road transport, which will be highly dependent on fossil fuels for many years, this is one of the main competitive advantages of HSR. The carbon intensity of HSR can even be further reduced by increasing the share of renewable energies. A background paper to this report clearly shows that HSR is still more environmentally friendly even when considering the construction of the tracks and rolling stock in a full life cycle perspective. Thus, estimating the impacts during the full life cycle doesn't change the low environmental impact of the HSR compared to other transport infrastructure or transport modes. The European Union has clearly identified the rail network to be a tool to reinforce the economic and political cohesion of the Union since the Maastricht Treaty and especially to integrate peripheral regions in the longer term. HSR strengthens links between cities and is part of a global transport policy to improve territorial integration. **Financial resources targeted at sustainable transport are generally a small fraction of those allocated for traditional (unsustainable) transport. A wide range of transport–relevant financial flows need to be reoriented towards sustainable transport to achieve the required paradigm shift and ensure that HSR is rightfully seen as a core element of transport provision.**

Hegemony internal

Competitiveness is key to hegemony—science and technology innovation is vital to sustain leadership.

Segal 4 — Adam Segal, Maurice R. Greenberg Senior Fellow in China Studies at the Council on Foreign Relations, 2004 ("Is America Losing Its Edge?; Innovation in a Globalized World," Foreign Affairs, January-February, Available Online to Subscribing Institutions via Lexis-Nexis)

The **U**nited **S**tates' **global primacy depends in large part on its ability to develop new technologies and industries faster than anyone else. For the last five decades, U.S. scientific innovation and technological entrepreneurship have ensured the country's economic prosperity and military power.** It was Americans who invented and commercialized the semiconductor, the personal computer, and the Internet; other countries merely followed the U.S. lead.¶ **Today**, however, **this technological edge**—so long taken for granted—**may be slipping**, and the most serious challenge is coming from Asia. Through competitive tax policies, increased investment in research and development(R&D), and preferential policies for science and technology (S&T) personnel, Asian governments are improving the quality of their science and ensuring the exploitation of future innovations. The percentage of patents issued to and science journal articles published by scientists in China, Singapore, South Korea, and Taiwan is rising. Indian companies are quickly becoming the second-largest producers of application services in the world, developing, supplying, and managing database and other types of software for clients around the world. South Korea has rapidly eaten away at the U.S. advantage in the manufacture of computer chips and telecommunications software. And even China has made impressive gains in advanced technologies such as lasers, biotechnology, and advanced materials used in semiconductors, aerospace, and many other types of manufacturing.¶ **Although** the United States' **technical dominance remains solid, the globalization of research and development is exerting considerable pressures on the American system.** Indeed, as the United States is learning, **globalization cuts both ways: it is both a potent catalyst of U.S. technological innovation and a significant threat to it. The U**nited **S**tates **will never be able to prevent rivals from developing new technologies; it can remain dominant only by continuing to innovate faster than everyone else.** But this won't be easy; to keep its privileged position in the world, the United States must get better at fostering

Warming impacts

Climate change poses an existential threat – only early and severe reductions in emissions can solve

Mazo 10 – PhD in Paleoclimatology from UCLA Jeffrey Mazo, Managing Editor, Survival and Research Fellow for Environmental Security and Science Policy at the International Institute for Strategic Studies in London, March, "Climate Conflict: How global warming threatens security and what to do about it," p.122

The best estimates for global warming to the end of the century range from 2.5-4.~C above pre-industrial levels, depending on the scenario. Even in the best-case scenario, the low end of the likely range is 1.goC, and in the worst 'business as usual' projections, which actual emissions have been matching, the range of likely warming runs from 3.1--7.1°C. Even keeping emissions at constant 2000 levels (which have already been exceeded), global temperature would still be expected to reach 1.2°C (O'9""1.5°C)above pre-industrial levels by the end of the century." **Without early and severe reductions in emissions, the effects of climate change in the second half of the twenty-first century are likely to be catastrophic** for the stability and security of countries in the developing world - not to mention the associated human tragedy. **Climate change could** even **undermine** the strength and stability of emerging and **advanced economies, beyond the knock-on effects on security of widespread state failure and collapse in developing countries**.' And although they have been condemned as melodramatic and alarmist, many informed observers believe that **unmitigated climate change** beyond the end of the century **could pose an existential threat to civilisation.**" What is certain is that **there is no precedent in human experience for such rapid change or such climatic conditions,** and **even in the best case adaptation** to these extremes **would mean profound** social, cultural and political **changes**.

Warming causes extinction – feedbacks lead to runaway warming

Brandenberg 99 (Dr. John, Physicist, Dead Mars, Dying Earth, p. 232-233)

The world goes on its merry way and fossil fuel use continues to power it. Rather than making painful or politically difficult choices such as inventing in fusion or enacting a rigorous plan of conserving, the industrial world chooses to muddle through the temperature climb. Let's imagine that America and Europe are too worried about economic dislocation to change course. 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 fall. 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 on 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 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 a second Venus for long. Its atmosphere is slowly lost – as is its water—because of the 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**.

Solvency

Solvency – generic

HSR re-integrates current transportation networks and improves them. Solves competitiveness, environment, oil dependency.

Eric C. **Peterson**, January **2012** [Consultant for American Public Transportation Association, Peterson has held significant leadership roles on Capitol Hill, with national and regional transportation associations, and within the U.S. Department of Transportation where he was the first Deputy Administrator of the Research and Innovative Technology Administration. He currently serves as a Research Associate for the Mineta Transportation Institute at San Jose State University. "An Inventory of the Criticisms of High Speed Rail with Suggested Responses and Counterpoints," http://www.apta.com/resources/reportsandpublications/Documents/HSR-Defense.pdf]

Another example of the critics' hyperbolic rhetoric is found in an op/ed by Michael Barone ("High-Speed Rail Is a Fast Way to Waste Taxpayer Money," *Washington Examiner,* January 18, 2011): "The Obama Administration is sending billions of stimulus dollars around the country for rail projects that makeno sense and that, if they are ever built will be a drag on taxpayers indefinitely." This is more of the same rhetoric from the folks who brought us "The California High-Speed Rail Proposal: A Due Diligence Report," that we discussed in the last chapter and will read more about in this and future chapters. For some reason these **critics believe that passenger rail improvement is an all out assault on America's decades-old love affair with highways and automobile.** It would appear that the critics of passenger rail are the only ones making that argument. **Passenger rail advocates** on the other hand **are arguing for an option that enables individuals to decide for themselves which mode of transportation best fits their travel needs at any particular time.** By many measures, passenger trains, if allowed to be operated in a timely and reliable manner, can be and are very competitive, and—in many cases—superior to either autos or airplanes. Prior to the all-out government-subsidized effort by certain interests in the '50s to destroy the passenger rail system, Americans were actually able to get to just about everywhere in America over a highly integrated network of privately owned intercity passenger trains, local transit, regional bus services, and public roadways. Now, **with the nation facing serious national security issues revolving around foreign oil supplies, soaring energy costs, serious environmental concerns, and overly congested roadways and airways, America is in dire need to re-integrate and rebalance its transportation system.** Intercity and high-speed passenger rail is critical to that highly integrated system. And talk about a drag on taxpayers, what could be worse than to continue the myth that the 18.6 cents per gallon gas tax is paying the full cost of building and maintaining the nation's roadways. Is it any wonder that many taxpayers are frustrated or jaded over government-sponsored transportation initiatives? They are being grossly misled by critics who have no qualms about distorting the facts. Here is another example. This is Wendell Cox (the lead author of "A Due Diligence Report") offering the following perspectives in the January 31, 2011 edition of *National Review*: "Among intercity transportation modes, only Amtrak is materially subsidized. User fees pay virtually all of the costs of airlines and airports, which (together with connecting ground transportation) link any two points in the nation within a day. The intercity highway system goes everywhere, and nearly all of it was built with user fees paid by drivers, truckers, and bus companies." The "user fees" Mr. Cox refers to do not come close to covering the cost of either the highway system or the aviation system. According to the Congressional Budget Office (CBO) the federal gas tax, diesel fuel tax, tire excise tax, and truck taxes pay less than half the annual cost of highway operation, maintenance and construction. Additionally, in recent years massive infusions from the general fund have been required to keep the highway trust fund solvent. On the aviation side, the Government Accountability Office notes that the amount of general funds added to the aviation trust fund on an annual basis has grown steadily over the past decade even as the fund's uncommitted balance has declined. There is no mode of transportation in the United States that does not require some level of "tax payer subsidy" in addition to whatever amount of "user fees" may be collected to support its infrastructure. Continuing, Cox stated: "Virtually everywhere high-speed rail has been constructed, financial liability has fallen to the taxpayer. The same can be said for every other transportation infrastructure project virtually anywhere in the world.[p32]

USFG key

A strong signal of federal commitment to HSR is critical to generate investment and confidence in the industry. Revenues can displace costs.

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 '11 (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#)

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.

A2 expensive

We only need to invest enough to build the HSR infrastructure. Once HSR is up and running it will be financially sustainable, able to cover its own costs.

Eric C. **Peterson**, January **2012** [Consultant for American Public Transportation Association, Peterson has held significant leadership roles on Capitol Hill, with national and regional transportation associations, and within the U.S. Department of Transportation where he was the first Deputy Administrator of the Research and Innovative Technology Administration. He currently serves as a Research Associate for the Mineta Transportation Institute at San Jose State University. "An Inventory of the Criticisms of High Speed Rail with Suggested Responses and Counterpoints," http://www.apta.com/resources/reportsandpublications/Documents/HSR-Defense.pdf]

In a Newsweek editorial on February 27, 2011, noted pundit George Will observed that: "Promotion of high-speed rail is an illumination of the progressive mind." He supported his claim by quoting Randal O'Toole of the Cato Institute: " A. High-speed rail connects big-city downtowns where only 7 percent of Americans work and 1 percent live, and B. High-speed rail will not displace enough cars to measurably reduce congestion." George Will went on in the same editorial to proclaim: "According to the Washington Post, China's fast trains are priced beyond ordinary workers' budgets, and in France and likewise in Japan there is only one high-speed rail line that is profitable." ¶ That may be true, but it's beside the point and the charge is intended to incite, not inform the reader. **There is a vast difference between the economic conditions of China and the U**nited **S**tates. **One day, Chinese workers' average wages may rival American workers, so the $9.00** (82 RMB) **high-speed rail coach fare between Shanghai and Hangzhou will seem insignificant as it would to any regular traveler in the Northeast Corridor who pays $79.00 to travel between Washington, D.C. and New York. ¶** As to the French TGV and the Japanese Shinkansen, there have been many valuable lessons learned from which the United States will benefit as we go forward. The most important of these lessons that the critics acknowledge but refuse to accept is that **passenger trains, if allowed to compete in an even environment with other modes, can cover their costs and in some instances even turn a profit. ¶** According to the New Jersey Public Interest Research Group, **high-speed rail lines generally cover their operating costs with fare revenues.** In the United States, **a financially sustainable high-speed rail system will** likely **not require operating subsidies from taxpayers (although public funding is essential to getting the system up and running).** ¶ **High-speed rail service generates enough operating profit that it can subsidize other, less-profitable intercity rail lines** in countries such as France and Spain, as well as in the U.S. Northeast. [p8]

A2 ridership

Recent Polls show 62 percent of Americans would ride HSR if it were an option

Eric C. **Peterson**, January **2012** [Consultant for American Public Transportation Association, Peterson has held significant leadership roles on Capitol Hill, with national and regional transportation associations, and within the U.S. Department of Transportation where he was the first Deputy Administrator of the Research and Innovative Technology Administration. He currently serves as a Research Associate for the Mineta Transportation Institute at San Jose State University. "An Inventory of the Criticisms of High Speed Rail with Suggested Responses and Counterpoints," http://www.apta.com/resources/reportsandpublications/Documents/HSR-Defense.pdf]

Probably **one of the most telling measures of public support** for passenger rail lies in the fact that Amtrak is enjoying the highest levels of ridership in its history. Additionally, the BizTimes Daily on December 1, 2010 reported a poll commissioned by the American Public Transportation Association (APTA) showing that: "Nearly **two-thirds of American adults** (62 percent) **said they would** definitely or probably **use high-speed rail** service for leisure or business travel **if it were an option.** The survey, taken among 24,711 adults, also asked how important various factors would be in choosing high-speed rail service. **Ninety-one percent** of respondents **said high-speed rail should offer shorter travel times compared to driving** to their destinations; 91 percent said the rail service should be less expensive than flying; 89 percent said it should be less expensive than driving; **and 85 percent said the rail service should integrate with local public transit** so they could avoid using rental cars and cabs, and paying parking fees." [p30]

Millions of people will ride HSR – California Proves

Eric C. **Peterson**, January **2012** [Consultant for American Public Transportation Association, Peterson has held significant leadership roles on Capitol Hill, with national and regional transportation associations, and within the U.S. Department of Transportation where he was the first Deputy Administrator of the Research and Innovative Technology Administration. He currently serves as a Research Associate for the Mineta Transportation Institute at San Jose State University. "An Inventory of the Criticisms of High Speed Rail with Suggested Responses and Counterpoints," http://www.apta.com/resources/reportsandpublications/Documents/HSR-Defense.pdf]

These figures and statements bear no resemblance to the 800-mile, largely green field high-speed rail project proposed by the California High-Speed Rail Authority. **According to the California High-Speed Rail Authority**, its **high-speed train system would lower the number of intercity automobile passengers on highways by up to 70 million annually.** What's more, **it will cost less than half the amount of expanding freeways and airports** to meet future intercity travel demand and would eliminate the need to construct 3,000 lane miles of highways, 91 airport gates, and five additional airport runways. "The California corridor is among the most ambitious in the nation. It includes the construction of a new, electrically-powered high-speed rail system of 800 miles serving major population centers from San Francisco and Sacramento to Los Angeles and San Diego with over 300 trains per day. Phase I calls for an approximately 500-mile system connecting Anaheim and Los Angeles through the Central Valley to San Francisco by 2020. Phase II would extend the system north to Sacramento and south to San Diego by 2026. Trains will reach speeds of 220 miles per hour, providing a travel time between Los Angeles and San Francisco of under 2 hours 40 minutes, compared to 6 hours by car. **When fully developed, California expects up to 100 million passengers per year, making it one of the busiest passenger rail lines in the world."** (Federal Railroad Administration) [11-12]

Surveys prove there will be strong ridership.

Dutzik et al. 10 — Tony Dutzik, Senior Policy Analyst with Frontier Group specializing in energy, transportation, and climate policy, holds an M.A. in print journalism from Boston University and a B.S. in public service from Penn State University, et al., with Siena Kaplan, Analyst with Frontier Group, and Phineas Baxandall, Federal Tax and Budget Policy Analyst with U.S. PIRG, ("Why Intercity Passenger Rail?," The Right Track: Building a 21st Century High-Speed Rail System for America, Published by the U.S. PIRG Education Fund, Available Online at http://americanhsra.org/whitepapers/uspirg.pdf, Accessed 06-10-2012, p. 15)

Trains are often a preferred mode of travel, especially for distances between 100 and 500 miles. A 2009 survey found that if fare and travel time were equal, 54

percent of Americans would prefer to travel to cities in their region by high-speed rail, with only 33 percent preferring car travel and 13 preferring air travel. Of Americans who had actually ridden high-speed rail, an overwhelming **82 percent preferred it to air travel.29**

2ac’s

2ac states

States lack jurisdiction for HSR – approval of multiple federal agencies is required for implementation

USGAO (United States Government Accountability Office) **2009** – the audit, evaluation, and investigation arm of the United States Congress ("High Speed Passenger Rail: Future Development Will Depend on Addressing Financial and Other Challenges and Establishing a Clear Federal Role," Report to Congressional Requesters, March 2009, p. 11, http://www.gao.gov/new.items/d09317.pdf?source=ra)

Several federal agencies have played a role in the planning and development of high speed rail projects to date, and others may potentially be involved as projects progress. FRA has generally been the lead federal agency—sharing that role with other federal agencies, such as the Surface Transportation Board—regarding the environmental review process. The Surface Transportation Board must give its approval before any new rail lines can be constructed that connect to the interstate rail network.11 FRA also designates corridors as "high speed rail" corridors, and is the agency responsible for any safety regulations or standards regarding high speed rail operations. Safety standards relative to tracks and signaling requirements become more stringent as train speeds increase. For example, at speeds of 125 miles per hour or higher, highway-rail grade crossings must be eliminated, and trains must be equipped with positive train control, which will automatically stop a train if the locomotive engineer fails to respond to a signal. To operate at speeds above 150 miles per hour, FRA requires dedicated track—that is, track that can only be used for high speed rail service. No safety regulations currently exist for speeds above 200 miles per hour. **In addition to FRA and the Surface Transportation Board, the Federal Highway Administration and the Federal Transit Administration (FTA) may play a role if highway or other transit right-of-way will be used or if highway or transit funds are to be used for some part of a high speed rail project. The Bureau of Land Management is responsible for granting rights-of-way on public lands for transportation purposes and, thus, would be involved in any new high speed rail project that envisions using public lands. Various other agencies would be involved in the environmental approval process, including the U.S. Fish and Wildlife Service and the Environmental** Protection Agency, among others.

States lack funding for HSR – USFG's general fund is key to solvency

Peterman, Frittelli, and Mallett '09 –Analyst in Transportation Policy, Specialists in Transportation Policy, from the Congressional Research Service- prepares information for members and committees of Congress ("High Speed Rail (HSR) in the United States" CRS Report for Congress, December 8 2009, p. 27, http://www.fas.org/sgp/crs/misc/R40973.pdf)

Proponents of rail funding have also recommended the use of bonds, including tax-exempt bonds and tax-credit bonds, to fund development of high speed rail lines. However, by borrowing the money and spreading out the repayment over a long period of time, bonds increase the cost of a project compared to paying for it all upfront. On the other hand, proponents contend that since rail improvements have long lifetimes, there is a case for having the cost of those improvements paid by the people who will benefit from the improvements many years into the future, rather than having the cost paid primarily by those in the present day. Based on the costs of high speed rail development and the revenue experience of high speed lines in other countries, it appears likely that the loans would have to be repaid primarily by the federal or state governments, or both. Consequently**, critics of this approach contend that it would be preferable to draw funding from the government's general fund, since a portion of the federal budget is already being financed by the sale of bonds, which will be repaid by future taxpayers. Prospects for significant funding from states are not promising. Most**

states' budgets are constrained by current economic difficulties, and those budgets face growing demands in other areas, such as pensions and health care, as well as for highways and transit. The availability of dedicated funding sources for highway and transit in some states, and the lack of a dedicated funding source for rail, makes it more difficult for states to pursue rail as an alternative to highways or transit when evaluating the need for new transportation investment.

No state will make a commitment to HSR without vast federal funding

American Interest 12 ("High Speed Rail Fail: US Edition" http://blogs.the-american-interest.com/wrm/2012/01/04/high-speed-rail-fail-us-edition/ January 4, 2012) CANOVA

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. It looks like the transportation of the future—like the energy of the future—will remain a dream in the minds of blue politicians and trendy urban planners for years to come.

2ac privates

States fail – private companies empirically won't invest in HSR projects that are under the threat of rescission

APTA (American Public Transportation Association) **2012** – non-profit that advocates for the advancement of public transportation programs in the U.S. ("An Inventory of the Criticisms of High-Speed Rail: with Suggested Responses and Counterpoints," January 2012, p. 36, http://www.apta.com/resources/reportsandpublications/Documents/HSR-Defense.pdf)

If the Post read the Review Group report carefully, it would better understand why **private capital has been reluctant to openly commit to the project. The demonstration of firm public sector financial commitments will be an absolute necessity prior to approaching sources of private capital, it stressed. In other words, investors won't sink money into a project** that's under the threat of rescission by the likes of Rep. Lewis.

2ac spending

$1 trillion over 30 years would cost $57.99 billion a year - a drop in the bucket for the FY budget.

Yglesias 10 (Matthew us a staff writer for thinkprogress.org. "HSR Opponents Make the Case for High-Speed Rail" http://thinkprogress.org/yglesias/2010/11/02/198969/hsr-opponents-make-the-case-for-high-speed-rail/?mobile=nc Nov 2, 2010) CANOVA

Currently, the government needs to pay 4.1% interest on a thirty year bond. And according to the handy dandy amortization-calc.com to amortize **a 30 year loan of $1 trillion at an interest rate of 4.1% per year would cost $57.99 billion a year for thirty years.** Note that's in fixed, nominal terms, so while it's a fair amount of money in the short term by the 2030s **it'll be a joke relative to our Nominal GDP. Contrast that to the $708 billion FY 2011 budget request the Obama administration submitted.** It seems to me that an 8.1 percent reduction in defense expenditures in order to create a transformative nationwide new infrastructure program would be a no-brainer. Of course the larger moral of the story here is that with government borrowing costs currently very low and large quantities of workers and other resources idle, it makes a ton of sense to borrow large sums of money to invest in useful projects. A trillion dollars is a lot of money. And at a higher interest rate, the return on investment you'd need to justify borrowing it might be quite large. But at today's rates and with plenty of genuinely idle resources around the situation is quite different. **With high unemployment and a frontloaded pace of construction, the $57.99 billion in annual debt-finance costs would be partially offset in the short-term by increased income and FICA revenue, decreased Unemployment Insurance outlays, and spillover benefits to retailers and other service professionals who would benefit from the increased pace of economic activity.**