# **Freight Rail Affirmative**

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### Inherency

Freight rail infrastructure is overburdened – demand will massively outpace capacity in the near future and Panama Canal projects make now the key time for investment
**The Economist, 2010** (High-speed railroading, The Economist, July 22 2010, http://www.economist.com/node/16636101) AK
**Freight railways’ very success is starting to create difficulties for them. The Department of Transportation estimates that many are already exceeding their theoretical capacity and are congested.** It estimates that lots **more investment will be needed**, because **capacity will have to rise by nearly** 90% **to meet forecast demand by 2035. The investment bill could rise yet more because of a change in the pattern of trade: in 2014 the Panama Canal opens a second lane, doubling its capacity and allowing it to carry bigger container vessels and bulk ships**. Coming through to Gulf of Mexico and East Coast ports, **these vessels will increase the need for better rail links inland**. In addition the freight railroads face a $15 billion bill for a new safety system to control trains on lines that also carry passengers or dangerous chemical cargoes. This system, Positive Train Control (PTC), is intended to stop or slow a train automatically if a driver goes too fast or passes a red signal. The bill to introduce PTC was signed by George Bush in 2008 only a month after a crash between a Metrolink commuter train and a Union Pacific freight train in California, causing 25 deaths and 135 injuries. The railway companies complain that only 3% of crashes are caused by the sort of human error that PTC is designed to avert and that claims that the system will improve efficiency on the network are unfounded. Whereas the FRA says that the new safety system will apply to only 65,000 miles (out of a total of over 140,000), the industry reckons it will cover more than half the network. The railways are seeking tax breaks and other subsidies to reduce the cost of complying.

#### **Congress continues to neglect freight rail in favor of highways and states aren’t willing to foot the bill**

Shank 12- CEO and president of Eno Center for Transportation, (Joshua, “The Federal Role in Transportation: Four Ideas for Greater Federal Involvement”, Eno Brief Newsletter, May 2012, http://www.enotrans.org/eno-brief/the-federal-role-in-transportation-four-ideas-for-greater-federal-involvement) ALT

There is a tendency to think in generalities when we talk about the federal role in transportation. It is easy to say, for example, that the federal role should include Interstate Commerce. But what exactly qualifies as such? Similarly, it is easy to say that the federal role should not include investments with purely localized benefits. But most investments have at least some national benefit – how do we measure it and how much is enough? In an attempt to move beyond generalities, below are fourideas for greater federal involvement. 1. National Freight Plan and Discretionary Grant Program. It is inconceivable, and yet largely true, that the U.S. has never really put together a national, multi-modal plan for freight transportation. Not only is there is no national freight plan; there is no federal money available specifically for freight despite its obvious relationship to interstate commerce and our global competitiveness. Developing a national freight plan would be a challenging but worthwhile process of establishing where the investment needs are national in scope.This means moving beyond highways to consider rail and inland waterways, and access to seaports and airports. In light of the coming Panama Canal expansion, and its potential implications for changing trade patterns, there could be substantial new investments that needs to be made and others that should be avoided. Federal guidance and leadership could be crucial. Fortunately, **the Senate authorization bill** (S. 1813) **moves in this direction by designating a primary freight network** within one year. This represents a substantial step forward in recognizing the federal role in freight transportation. **Unfortunately, S. 1813 also distributes money for the freight network entirely by formula, and it is almost entirely** highway focused.Freight investments are by nature lumpy and distributing money for them by formula does little to ensure cost-effectiveness from a national perspective. The most cost-effective freight investments are often in relieving bottlenecks, which may require substantial capital investment in multiple modes but concentrated in one place. There is little incentive for states to invest precious formula dollars in these capital-intensive projects, but those same states might compete for discretionary dollars [from the federal government] for those projects.

### Plan

#### The United States federal government should substantially increase its investment in freight rail infrastructure in the United States.

### Economy Advantage.

#### U.S economic growth is stagnating – fiscal stimulus is neededBloomberg, June 6 (“With U.S. Economy Stuck, Fiscal Fix Can’t Wait Any Longer”, http://www.bloomberg.com/news/2012-07-06/with-u-s-economy-stuck-fiscal-fix-can-t-wait-any-longer.html)

Today’s dismal jobs [report](http://www.bls.gov/news.release/empsit.nr0.htm) is another sobering reminder that **the U.S. economy is stuck, if not headed in reverse**. Employers added a modest 80,000 jobs in June, falling short of the 100,000 gain that economists surveyed by Bloomberg News had predicted. That rate is nowhere near the pace needed to lower 8.2 percent unemployment. The **lackluster job growth** comes on the heels of an Institute for Supply Management [report](http://www.ism.ws/ismreport/mfgrob.cfm) this week showing that the manufacturing sector had contracted in June for the first time since July 2009. **Household spending, central to powering the economic recovery, fell** slightly in May. The silver lining is that private employers added jobs for the 28th straight month and other indicators of the economy’s health -- number of hours worked, hourly wages and temporary jobs -- picked up slightly. The 8.2 percent jobless rate remained unchanged, and fewer people stopped looking for work. Still**, it’s clear the recovery, which started out strong in the first half of 2012, is stagnating**. Many economists and investors are looking to the [Federal Reserve](http://topics.bloomberg.com/federal-reserve/), which last month extended its Operation Twist bond-buying program in the hopes of flooding the market with cheap credit. Chairman [Ben S. Bernanke](http://topics.bloomberg.com/ben-s.-bernanke/) has said the Fed remains open to doing more if the economy shows signs of a severe slowdown. **Analysts say today’s jobs reports is a flashing neon sign for further Fed action**. Stubborn Logjam **But this isn’t a problem that only the Fed can -- or should -- solve.** As Bernanke has said, monetary policy can only do so much to break the stubborn logjam preventing consumers from spending and businesses from investing and hiring. Look no further than Thursday’s collective market shrug after three central banks in [Europe](http://topics.bloomberg.com/europe/) and [China](http://topics.bloomberg.com/china/) took uncoordinated steps to stimulate borrowing and spending. **At some point,** elected officialsin both parties **are going to have to take steps to get the economy growing faster**. What’s needed has been clear for a long time: Resolve the uncertainty about expiring tax breaks and looming spending cuts; create short-term fiscal stimulus**; and outline a more sustainable long- term fiscal path.**

#### Current federal transportation policy is a road to nowhere - transportation infrastructure offers a unique opportunity to rebuild the economy but the lack of investment is a drag on growth and damages U.S. economic competitiveness

**Strauss, 12** - associate director of Renewing America Publications at the Council on Foreign Relations (Rebecca, “Road to Nowhere: Federal Transportation Infrastructure Policy”, June, http://www.cfr.org/united-states/road-nowhere-federal-transportation-infrastructure-policy/p28419)//DH

Concerns over the state of U.S. transportation infrastructure are higher on the federal policy agenda than at any time since President Dwight D. Eisenhower championed the creation of the interstate highway system in the 1950s. A generation of U.S. infrastructure built fifty years ago is reaching the end of its lifecycle, and new construction has not kept pace with population growth. Meanwhile, international competitors**, particularly China**, are making massive investments in state-of-the-art transportation systems. Moving people and goods efficiently matters for the U.S. economy. The economic cost of traffic congestion alone in wasted time and fuel was estimated at $101 billion, or $713 per commuter, **in 2010**.1 According to one estimate**, the country’s economic growth would have been 0.2 percentage points higher in 2011 if necessary transportation infrastructure maintenance and improvements had been made.**2 If current spending levels persist, by 2020 the drag on growth could be 1.2 percentage points. With interest rates remaining at historic lows and unemployment near double-digit highs, an opportunity exists to marry shorter-term job creation with investments that will pay longer-term benefits to U.S. economic competitiveness.

#### Specifically, freight congestion is getting worse and costing the U.S. up to $1 trillion annually – that’s 7% of the economy

**Davidson, 5/20** (Paul, USA Today, “USA’s creaking infrastructure holds back economy, 5/20/2012, http://www.usatoday.com/money/economy/story/2012-05-20/creaking-infrastructure/55096396/1)

**The shortcomings were partly masked during the recession as fewer Americans worked and less freight was shipped,** easing traffic on transportation corridors**. But** interviews with shippers and logistics companies show delays are starting to lengthen **along with the moderately growing economy. "I call this** a stealth attack on our economy," says Janet **Kavinoky, executive director of transportation and infrastructure for the**[**U.S. Chamber of Commerce**](http://content.usatoday.com/topics/topic/Organizations/Political%2BBodies/United%2BStates%2BChamber%2Bof%2BCommerce)**.** "It's not like an immediate crisis. **It's something that's sneaking up on us." Freight bottlenecks and other congestion cost** about $200 billion a year, or 1.6% of U.S. economic output, according to a report last year by Building America's Future Educational Fund, a bipartisan coalition of elected officials. The chamber of commerce estimates such costs **are as high as** $1 trillion annually, or 7% of the economy. **Yet, there's little prospect for more infrastructure investment as a divided Congress battles about how to cut the $1.3 trillion federal deficit, and state and local governments face their own budget shortfalls**. Government investment in highways, bridges, water systems, schools and other projects has fallen each year since 2008. [IHS Global Insight](http://content.usatoday.com/topics/topic/IHS%2BGlobal%2BInsight) expects such outlays to drop 4.4% this year and 3% in 2013. **The U.S. is spending about half of the $2.2 trillion that it should over a five-year period to repair and expand overburdened infrastructure,** says Andrew Herrmann, president of the [American Society of Civil Engineers](http://content.usatoday.com/topics/topic/Organizations/Non-profits%2C%2BActivist%2BGroups/American%2BSociety%2Bof%2BCivil%2BEngineers). Inland waterways, for example, carry coal to power plants, iron ore to steel mills and grain to export terminals. But inadequate investment led to nearly 80,000 hours of lock outages in fiscal 2010, four times more than in fiscal 2000. Most of the nation's 200 or so locks are past their 50-year design life. A prime example is an 83-year-old lock on the Ohio River near Olmsted, Ill. Congress set aside $775 million to replace it and another nearby lock in 1988. The project began in 1993 and was scheduled to be finished by 2000 but still isn't complete, in part because of engineering modifications intended to save $60 million. Now, the cost has ballooned to $3.1 billion, and the new lock won't be ready until 2020 or later. The cost overrun leaves little money for other projects. About $8 billion is needed to replace 25 locks and dams in the next 20 years, says Michael Toohey, president of the Waterways Council, an advocacy group. But Congress allocates only about $170 million a year, with the government and a 20-cent-a-gallon tax on tow operators each funding half. Toohey says $385 million a year is required to fund all the work. "We're the silent industry" because waterways are less visible, he says. **The biggest railroad bottleneck is in Chicago. A third of the nation's freight volume goes through the city as 500 freight trains jostle daily for space** with 800 passenger trains and street traffic. Many freight rail lines crisscross at the same grade as other trains and cars — a tangle that forces interminable waits. **It takes an average freight train about 35 hours to crawl through the city. Shipping containers typically languish in rail yards several days before they can be loaded onto trains.**

#### Freight rail investment spurs economic growth – several reasons

#### First, investing in freight rail ensures the sustainability of the U.S. transportation network which transports 13% of goods, many of which are key economic commodities

**GAO, 2009** – Government Accountability Office (“Freight Rail Security” 04/2009, http://www.gao.gov/assets/290/288753.pdf) ML

**Freight railroads are a** key component of the nation’s transportation network, operating on more than 140,000 miles of track, traversing thousands of bridges and tunnels, and **carrying millions of tons of freight annually. As a principal carrier of freight in the United States, freight railroads are** vital to the U.S. economy**, transporting nearly** 13 percent **of the nation’s goods and generating $42 billion in annual revenues. Freight railroads carry many major commodities, including coal, grain and other agricultural products, food, steel, motor vehicles**, and highly hazardous chemicals, such as chlorine and ammonia. Freight railroad companies are also the primary owners of the infrastructure and rail lines over which they operate and pay billions of dollars each year to construct, maintain, and renew their tracks and equipment, according to the Association of American Railroads (AAR).

#### Additionally, every job added to freight rail would create 4.5 jobs elsewhere in the economy

**AAR, 2011** – Association of American Railroads (“The Economic Impact of America’s Freight Railroads”, 10/2011, http://aar.org/~/media/aar/Background-Papers/The-Economic-Impact-of-Freight.ashx) ML

The **more than 175,000 freight railroad employees are among America’s most highly compensated workers**. According to U.S. government data, in 2010 the average fulltime rail industry employee earned wages of $82,600 and fringe benefits of $25,100, for total average compensation of $107,800. By contrast, the average wage per full-time employee in the United States in 2010 was $53,000 (just 64 percent of the comparable rail figure) and average total compensation was $66,000 (just 61 percent of the rail figure). According to a U.S. **Department of Commerce model of the U.S. economy**, in addition to their own employees **freight railroads sustain more than 1 million additional jobs at firms that provide goods and services to railroads or that are recipients of spending by the employees of railroads and their suppliers.** The model indicates that every job in day-today freight rail operations sustains another 4.5 jobs elsewhere in the economy**, and that freight railroads generate nearly $265 billion in total economic activity each year including direct, indirect, and induced effects**.

#### And, every sector of the economy relies on freight rail – disruptions in the national rail network impact the entire U.S. economyTSA, 2012 (Transportation Security Administration, “Freight Rail: Overview”, http://www.tsa.gov/what\_we\_do/tsnm/freight\_rail/index.shtm)The freight railroad network is a vital part of the national economy, playing a key role in the global supply chain for both raw and finished goods. There are approximately 140,000 miles of active railroad track in the United States, upon which 565 common carrier freight railroads operate. Freight railroads serve nearly every industrial, wholesale, retail, and resource-based sector of the U.S. economy, and are responsible for transporting a majority of goods and commodities that Americans depend on daily. Since other sectors rely on railroads as a primary transportation provider, disruptions to the national rail network could have an adverse impact on the national economy as a whole.

#### Even absent a recession, slow growth leads to global wars

Khalilzad 11 – PhD, Former Professor of Political Science @ Columbia, Former ambassador to Iraq and Afghanistan

Zalmay Khalilzad was the United States ambassador to Afghanistan, Iraq, and the United Nations during the presidency of George W. Bush and the director of policy planning at the Defense Department from 1990 to 1992. "The Economy and National Security" Feb 8 www.nationalreview.com/blogs/print/259024

Today, economic and fiscal trends pose the most severe long-term threat to the United States’ position as global leader. While the United States suffers from fiscal imbalances and low economic growth, the economies of rival powers are developing rapidly. The continuation of these two trends could lead to a shift from American primacy toward a multi-polar global system, leading in turn to increased geopolitical rivalry and even war among the great powers. The current recession is the result of a deep financial crisis, not a mere fluctuation in the business cycle. Recovery is likely to be protracted. The crisis was preceded by the buildup over two decades of enormous amounts of debt throughout the U.S. economy — ultimately totaling almost 350 percent of GDP — and the development of credit-fueled asset bubbles, particularly in the housing sector. When the bubbles burst, huge amounts of wealth were destroyed, and unemployment rose to over 10 percent. The decline of tax revenues and massive countercyclical spending put the U.S. government on an unsustainable fiscal path. Publicly held national debt rose from 38 to over 60 percent of GDP in three years. Without faster economic growth and actions to reduce deficits, publicly held national debt is projected to reach dangerous proportions. If interest rates were to rise significantly, annual interest payments — which already are larger than the defense budget — would crowd out other spending or require substantial tax increases that would undercut economic growth. Even worse, if unanticipated events trigger what economists call a “sudden stop” in credit markets for U.S. debt, the United States would be unable to roll over its outstanding obligations, precipitating a sovereign-debt crisis that would almost certainly compel a radical retrenchment of the United States internationally. Such scenarios would reshape the international order. It was the economic devastation of Britain and France during World War II, as well as the rise of other powers, that led both countries to relinquish their empires. In the late 1960s, British leaders concluded that they lacked the economic capacity to maintain a presence “east of Suez.” Soviet economic weakness, which crystallized under Gorbachev, contributed to their decisions to withdraw from Afghanistan, abandon Communist regimes in Eastern Europe, and allow the Soviet Union to fragment. If the U.S. debt problem goes critical, the United States would be compelled to retrench, reducing its military spending and shedding international commitments. We face this domestic challenge while other major powers are experiencing rapid economic growth. Even though countries such as China, India, and Brazil have profound political, social, demographic, and economic problems, their economies are growing faster than ours, and this could alter the global distribution of power. These trends could in the long term produce a multi-polar world. If U.S. policymakers fail to act and other powers continue to grow, it is not a question of whether but when a new international order will emerge. The closing of the gap between the United States and its rivals could intensify geopolitical competition among major powers, increase incentives for local powers to play major powers against one another, and undercut our will to preclude or respond to international crises because of the higher risk of escalation. The stakes are high. In modern history, the longest period of peace among the great powers has been the era of U.S. leadership. By contrast, multi-polar systems have been unstable, with their competitive dynamics resulting in frequent crises and major wars among the great powers. Failures of multi-polar international systems produced both world wars. American retrenchment could have devastating consequences. Without an American security blanket, regional powers could rearm in an attempt to balance against emerging threats. Under this scenario, there would be a heightened possibility of arms races, miscalculation, or other crises spiraling into all-out conflict. Alternatively, in seeking to accommodate the stronger powers, weaker powers may shift their geopolitical posture away from the United States. Either way, hostile states would be emboldened to make aggressive moves in their regions.

### Environment Advantage

#### Global warming is real and anthropogenic – top climate scientists agree

Anderegg et al 10 – PhD Candidate @ Stanford in Biology (William, “Expert credibility in climate change,” National Academy of Sciences, p. 12107-12109)

Preliminary reviews of scientific literature and surveys of cli- mate scientists indicate striking agreement with the primary conclusions of the Intergovernmental Panel on Climate Change (IPCC): anthropogenic greenhouse gases have been responsible for “most” of the “unequivocal” warming of the Earth’s average global temperature over the second half of the 20th century (1–3). Nonetheless, substantial and growing public doubt remains about the anthropogenic cause and scientific agreement about the role of anthropogenic greenhouse gases in climate change (4, 5). A vocal minority of researchers and other critics contest the conclusions of the mainstream scientific assessment, frequently citing large numbers of scientists whom they believe support their claims (6–8). This group, often termed climate change skeptics, contrarians, or deniers, has received large amounts of media attention and wields significant influence in the societal debate about climate change impacts and policy (7, 9–14). An extensive literature examines what constitutes expertise or credibility in technical and policy-relevant scientific research (15). Though our aim is not to expand upon that literature here, we wish to draw upon several important observations from this literature in examining expert credibility in climate change. First, though the degree of contextual, political, epistemological, and cultural in- fluences in determining who counts as an expert and who is credible remains debated, many scholars acknowledge the need to identify credible experts and account for expert opinion in tech- nical (e.g., science-based) decision-making (15–19). Furthermore, delineating expertise and the relative credibility of claims is critical, especially in areas where it may be difficult for the majority of decision-makers and the lay public to evaluate the full complexities of a technical issue (12, 15). Ultimately, however, societal decisions regarding response to ACC must necessarily include input from many diverse and nonexpert stakeholders. Because the timeline of decision-making is often more rapid than scientific consensus, examining the landscape of expert opinion can greatly inform such decision-making (15, 19). Here, we examine a metric of climate-specific expertise and a metric of overall sci- entific prominence as two dimensions of expert credibility in two groups of researchers. We provide a broad assessment of the rel- ative credibility of researchers convinced by the evidence (CE) of ACC and those unconvinced by the evidence (UE) of ACC. Our consideration of UE researchers differs from previous work on climate change skeptics and contrarians in that we primarily focus on researchers that have published extensively in the climate field, although we consider all skeptics/contrarians that have signed pro- minent statements concerning ACC (6–8). Such expert analysis can illuminate public and policy discussions about ACC and the extent of consensus in the expert scientific community. We compiled a database of 1,372 climate researchers based on authorship of scientific assessment reports and membership on multisignatory statements about ACC (SI Materials and Methods). We tallied the number of climate-relevant publications authored or coauthored by each researcher (defined here as expertise) and counted the number of citations for each of the researcher’s four highest-cited papers (defined here as prominence) using Google Scholar. We then imposed an a priori criterion that a researcher must have authored a minimum of 20 climate publications to be considered a climate researcher, thus reducing the database to 908 researchers. Varying this minimum publication cutoff did not ma- terially alter results (Materials and Methods). We ranked researchers based on the total number of climate publications authored. Though our compiled researcher list is not comprehensive nor designed to be representative of the entire cli- mate science community, we have drawn researchers from the most high-profile reports and public statements about ACC. Therefore, we have likely compiled the strongest and most credentialed re- searchers in CE and UE groups. Citation and publication analyses must be treated with caution in inferring scientific credibility, but we suggest that our methods and our expertise and prominence criteria provide conservative, robust, and relevant indicators of relative credibility of CE and UE groups of climate researchers (Materials and Methods). Results and Discussion The UE [unconvinced by evidence] group comprises only 2% of the top 50 climate researchers as ranked by expertise (number of climate publications), 3% of researchers of the top 100, and 2.5% of the top 200, excluding researchers present in both groups (Materials and Methods). This result closely agrees with expert surveys, indicating that ≈97% of self-identified actively publishing climate scientists agree with the tenets of ACC (2). Furthermore, this finding complements direct polling of the climate researcher community, which yields quali- tative and self-reported researcher expertise (2). Our findings capture the added dimension of the distribution of researcher expertise, quantify agreement among the highest expertise climate researchers, and provide an independent assessment of level of scientific consensus concerning ACC. In addition to the striking difference in number of expert researchers between CE and UE groups, the distribution of expertise of the UE group is far below that of the CE group (Fig. 1). Mean expertise of the UE group was around half (60 publications) that of the CE group (119 pub- lications; Mann–Whitney U test: W = 57,020; P < 10−14), as was median expertise (UE = 34 publications; CE = 84 publications). Furthermore, researchers with fewer than 20 climate publications comprise ≈80% the UE group, as opposed to less than 10% of the CE group. This indicates that the bulk of UE researchers on the most prominent multisignatory statements about climate change have not published extensively in the peer-reviewed climate literature. We examined a subsample of the 50 most-published (highest- expertise) researchers from each group. Such subsampling facili- tates comparison of relative expertise between groups (normalizing differences between absolute numbers). This method reveals large differences in relative expertise between CE and UE groups (Fig. 2). Though the top-published researchers in the CE group have an average of 408 climate publications (median = 344), the top UE re- searchers average only 89 publications (median = 68; Mann– Whitney U test: W = 2,455; P < 10−15). Thus, this suggests that not all experts are equal, and top CE researchers have much stronger expertise in climate science than those in the top UE group. Finally, our prominence criterion provides an independent and approximate estimate of the relative scientific significance of CE and UE publications. Citation analysis complements publication analysis because it can, in general terms, capture the quality and impact of a researcher’s contribution—a critical component to overall scientific credibility—as opposed to measuring a research- er’s involvement in a field, or expertise (Materials and Methods). The citation analysis conducted here further complements the publication analysis because it does not examine solely climate- relevant publications and thus captures highly prominent re- searchers who may not be directly involved with the climate field. We examined the top four most-cited papers for each CE and UE researcher with 20 or more climate publications and found immense disparity in scientific prominence between CE and UE communities (Mann–Whitney U test: W = 50,710; P < 10−6; Fig. 3). CE researchers’ top papers were cited an average of 172 times, compared with 105 times for UE researchers. Because a single, highly cited paper does not establish a highly credible reputation but might instead reflect the controversial nature of that paper (often called the single-paper effect), we also considered the av- erage the citation count of the second through fourth most-highly cited papers of each researcher. Results were robust when only these papers were considered (CE mean: 133; UE mean: 84; Mann–Whitney U test: W = 50,492; P < 10−6). Results were ro- bust when all 1,372 researchers, including those with fewer than 20 climate publications, were considered (CE mean: 126; UE mean: 59; Mann–Whitney U test: W = 3.5 × 105; P < 10−15). Number of citations is an imperfect but useful benchmark for a group’s scientific prominence (Materials and Methods), and we show here that even considering all (e.g., climate and nonclimate) publications, the UE researcher group has substantially lower prominence than the CE group. We provide a large-scale quantitative assessment of the relative level of agreement, expertise, and prominence in the climate re- searcher community. We show that the expertise and prominence, two integral components of overall expert credibility, of climate researchers convinced by the evidence of ACC vastly overshadows that of the climate change skeptics and contrarians. This divide is even starker when considering the top researchers in each group. Despite media tendencies to present both sides in ACC debates (9), which can contribute to continued public misunderstanding re- garding ACC (7, 11, 12, 14), not all climate researchers are equal in scientific credibility and expertise in the climate system. This extensive analysis of the mainstream versus skeptical/contrarian researchers suggests a strong role for considering expert credibi- lity in the relative weight of and attention to these groups of re- searchers in future discussions in media, policy, and public forums regarding anthropogenic climate change.

#### Absent public investment, unmet freight demand will shift to trucks and highwaysNational Surface Transportation Policy and Revenue Study Commision, 2007 (Final Report – Volume III: Section 1 – Technical Issues Papers, “Analysis of Future Issues and Changing Demands on the System”, March 13, http://transportationfortomorrow.com/final\_report/volume\_3\_html/technical\_issues\_papers/paper3e44.htm?name=4l\_07)

In 2003, the AASHTO Freight-Rail Bottom Line Report estimated that **at the level of investment the Class I railroads could afford, the rail system could handle only around** half **of its ‘fair share' of the forecast growth in freight tonnage.** The unmet half of new rail demand would likely shift to trucks and the highway system**. To keep pace with economic growth and maintain its current share of freight tonnage, the rail system needs an investment of $175 to $195 billion over the next 20 years. The report anticipated that while the railroads would be able to provide the majority of the funding needs** (up to $142 billion dollars), **the remainder** (up to $53 billion, or $2.65 billion annually) **would have to come from** other sources, perhaps including loans, tax credits, and other forms of public-sector participation.

#### Rail is better for environment - lowest emission transportation mode and substantially more fuel-efficient

DoT, 10- US Department of Transportation, (“Transportation’s Role in Reducing Greenhouse Gas Emissions: Volume 1”, report to Congress, April 2010, http://ntl.bts.gov/lib/32000/32700/32779/DOT\_Climate\_Change\_Report\_-\_April\_2010\_-\_Volume\_1\_and\_2.pdf) ALT

Freight modes have very different GHG profiles, as shown in Figure 2.12. On a ton-mile basis, freight rail is the lowest emission mode, followed by pipelines and marine transport. These three freight modes specialize in carrying bulk or containerized goods in large quantities, at relatively slow speeds, and achieve significant economies of scale. Trucking generates significantly higher GHG emissions per ton-mile, reflecting the energy inefficiencies of relatively small vehicles traveling at higher speeds, as well as the lighter weight of its cargo. Aircraft, which primarily carry high-value, time-sensitive cargo, have by far the highest GHG emissions per ton of freight.49 However, because of the different mix of traffic that the modes carry, a head-to-head comparison between modes— based purely on tonnage—may not present a complete picture. A more appropriate comparison would be to consider the energy consumption of the different modes moving similar traffic within specific corridors. For instance, a FRA study compared rail and truck fuel efficiency by focusing on corridor specific competitive services that each mode provides. Overall, the study found that rail achieved 1.4 to 9 times more ton-miles per gallon than competing truckload service. An update to this study finds that rail-fuel improvements have outpaced truck-fuel improvements over the study period.50

#### **Using rail to transport freight drastically cuts emissions**

CER 11- Community of European Railway and Infrastructure Companies (“Rail transport has significant potential to lower CO2 emissions through modal shift, concludes new study”, The Voice of European Railways, http://www.cer.be/press/press-releases/2187-rail-transport-has-significant-potential-to-lower-co2-emissions-through-modal-shift-concludes-new-study) ALT

Up to 20 Mtonne (million tonnes) of CO2 emissions from freight - some 7% of the total emissions from road and rail freight - could be reduced through full use of main rail corridors and the primary rail network in 2020, a new study examining the potential modal shift from road to rail has concluded. The study, “Potential of modal shift to rail transport - Study on the projected effects on GHG emissions and transport volumes” was commissioned by the Community of European Railway and Infrastructure Companies (CER) and the International Union of Railways (UIC) to consider the potential levels of modal shift to rail, and in particular the greenhouse gas (GHG) reduction savings that could result. It was undertaken by the consultancies CE Delft (Netherlands) and TRT (Italy). The study gives important detail on how modal shift to rail can help reach the targets outlined in the European Commission’s recent Transport White Paper\*. An assessment of the available infrastructure capacity shows that through maximising use of existing infrastructure alone, a 30-40% growth in train-kilometres in 2020 could be accommodated. If this increased capacity was allocated equally to freight and passenger services, rail freight traffic could grow by 83% and passenger transport by 23% over the whole network. The report says there is particular scope for rail freight to increase its market share in certain segments such as international containerised transport, with the feasibility of growth already clearly demonstrated in countries such as Switzerland, and at the port of Rotterdam where levels of modal split that include the doubling of rail traffic have been set for hinterland container traffic. For passenger transport, the GHG reduction potential is less clear-cut, although the maximum modal shift calculated has been a reduction of 70 Mtonne CO2-eq. in the EU-27 (9% of passenger transport emissions).

#### Warming is an existential risk – must accelerate reductions to avoid extinction

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, 3-2010, “Climate Conflict: How global warming threatens security and what to do about it,” pg. 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.

#### Climate change results in every major impact – ecological catastrophe, famine, drought, resource wars and nuclear war

**Pfeiffer 04** - Geologist (Dale, “Global Climate Change & Peak Oil”, The Wilderness Publications, http://www.fromthewilderness.com/free/ww3/072004\_global\_climate3.shtml)//JS

But the real importance of the report lies in the statement of probability and in the authors' recommendations to the President and the National Security Council. While no statistical analysis of probability is given in the report as it has been released (any such statistical analysis would most likely be classified), the authors state that “**the plausibility of severe and rapid climate change is higher than most of the scientific community and perhaps all of the political community is prepared for**.”6 They say that **instead of asking whether this could happen, we should be asking when this will happen**. They conclude: “It is quite plausible that **within a decade the evidence of an imminent abrupt climate shift may become clear and reliable**.”7 From such a shift, the report claims, utterly **appalling ecological consequences would follow. Europe and Eastern North America would plunge into a mini-ice age,** with weather patterns resembling present day Siberia. **Violent storms could wreak havoc around the globe. Coastal areas** such as The Netherlands, New York, and the West coast of North America **could become uninhabitable, while most island nations could be completely submerged**. Lowlands like Bangladesh could be permanently swamped. While flooding would become the rule along coastlines, mega-droughts could destroy the world's breadbaskets. The dust bowl could return to America's Midwest. **Famine and drought would result in a major drop in the planet's ability to sustain the present human population. Access to water could become a major battleground – hundreds of millions could die as a result of famine and resource wars.** More than 400 million people in subtropical regions will be put at grave risk. There would be mass migrations of climate refugees, particularly to southern Europe and North America. **Nuclear arms proliferation in conjunction with resource wars could very well lead to nuclear wars**.8 And none of this takes into account the effects of global peak oil and the North American natural gas cliff. Not pretty.

### Solvency

#### **Federal action is key - incremental actions fail and only the federal government can maintain economic competitiveness and spur private action**

Rosenbloom and Wachs ’12 (Sandra Rosenbloom, Director of the Drachman Institute at the University of Arizona and a Professor of Planning at the Institute for Land and Regional Development Studies; Martin Wachs, senior principal researcher at RAND and a professor at the Pardee RAND Graduate School, formerly served as director of the RAND Transportation, Space, and Technology Program, was also formerly a professor of civil and environmental engineering and professor of city and regional planning at the University of California, Berkeley, where was also director of the Institute of Transportation Studies. Prior to this, he spent 25 years at UCLA, where he served three terms as chairman of the Department of Urban Planning, “A Federal Role in Freight Planning and Finance”, http://www.rand.org/content/dam/rand/pubs/monographs/2012/RAND\_MG1137.pdf)

Demands for Federal Action Most analysts and stakeholder **groups** have concluded that there is a role for the federal government in addressing problems in the U.S. freight system. At the core of major debates, however, are questions about how often, how much, how, and with what sources of funds the federal government should respond. Many industry groups and analysts have argued that **the federal government should make substantial efforts to address freight issues**. The American Association of State Highway and Transportation Officials (undated) asserted that, Unless America takes direct action soon to develop [a] New Interstate Highway System, the nation’s freight highway network will experience greater unreliability, delay, and congestion. Incremental changes will fall far short of the necessary investment needed to reverse these trends. (p. 21) Many freight stakeholders**, particularly in the private sector,** argue **that the** federal government must intervene aggressively to maintain national productivity and increase American competitiveness. Michael Lind, writing in the December 2009 issue of McKinsey Quarterly, commented, . . . **the low cost and reliability of freight transportation in the United States have been critical to the country’s economic success. But America’s failure to modernize its overloaded freight transportation infrastructure—chiefly the railroad network** and highways used by trucks, but also inland waterways, ports, and airports—**is imposing costs on American efficiency.** As a result of congestion (highway delays, for instance), the penalty on American growth exacted by logistics costs rose from 8.6 percent of GDP in 2003 to 10.1 percent in 2007, even before the crisis [the current downturn in the economy]. Robert Poole and Adrian Moore of the Reason Foundation, which has called for reduced federal funding of a variety of transportation related activities, find that **freight activities are worthy of federal assistance** (Poole and Moore, 2010). Calling the urban interstates “the lifeblood of goods movement” (p. i) Poole and Moore conclude that commerce and international trade are clear federal responsibilities and should “be at the core of a rethought federal role” in transportation. But these are not consensus views. RAND studies (Ortiz et al., 2007; Hillestad, van Roo, and Yoho, 2009) and a 2009 Transportation Research Board study (2009) have concluded that since most freight problems are local or regional in nature, their solutions should largely be fashioned and paid for by state and local governments.

Plan results in a modal shift in favor of rail – political action sends a signal of consensus **Bergendorff, no date** - senior consultant Macroplan Consulting specializing in technology, sustainability and innovation primarily with railway transportation (Mads, “Railways Report”, International Union of Railways, http://www.unep.fr/scp/csd/wssd/contributions/sector\_reports/sectors/railways/railways\_sum.htm)What is needed from the rail sector is to build on its social and environmental advantages. The challenge to the railways and their governments is to accommodate the influx of transport if and when measures are taken from the political level to switch **the modal shift in favour of rail**. This **requires a** readiness **to conquer both technical and organisational obstacles. This implies a major increase in traffic intensity as well as extension and upgrading of lines.** At company level, the main challenge towards sustainable mobility is to make use of all the existent research and experience in order to utilise developed tools and implement technical and organisational solutions that support sustainable mobility in the railway sector. This is a challenge of establishing the basic organisational conditions for full-scale implementation of appropriate solutions that are cost efficient or even better constitute positive contribution to railways long-term investment plans. **What is needed from society is** action behind the political consensus to support rail and public transportation**. This calls for a level playing field among the transport modes concerning infrastructure charges**, internalisation of external costs, and appropriate conditions for deregulation of the rail sector world-wide. Some roles have significantly changed during the last decade. In the beginning of the 1990'ties the railway companies were more or less a part of the state, thus defining its own performance levels. With the deregulation and the rise of private independent rail enterprises (operators, leasing companies etc.), **the shared responsibilities of the public transport service level is now truly back** in the arms of the politicians. A railway as a part of a public transportation system is a service to the community, the local government, the national or even international regions. **One way for the political level to enhance good public transport is to consider not only the economic but also the environmental and social aspects** of an invitation to tender. **The end consumer will get what authorities are asking for and what market driven railways can provide.** This is part of the adjustment to a market situation that was not evident in 1990's. **Rail is an essential part of the movement towards sustainable mobility**. Railways, public transport companies and the rail equipment manufacturing industry are ready to shoulder their responsibilities in full co-operation with their stakeholders.

#### Freight rail projects would happen quickly, shifting 83% of trucks off the highway, reducing carbon emissions by 39% and increasing the economy 10% by 2030

**Longman, 2009** – Senior research fellow with New America Foundation, Schwartz senior fellow at Washington Monthly, senior writer and deputy assistant managing editor at U.S. News & World Report, graduate of Oberlin College, fellow at Columbia University (Phillip, “Back on Tracks”, The Washington Monthly, January/February 2009, http://www.newamerica.net/publications/articles/2009/back\_tracks\_9914)

By all rights, **America's dilapidated rail lines ought to be a prime candidate for** some of that **spending.** **All over the country there are opportunities** like the I-81/Crescent Corridor deal**, in which relatively modest amounts of capital could unclog massive traffic bottlenecks, revving up the economy while saving energy** and lives. **Many of these projects have already begun**, like Virginia's, **or are sitting on planners' shelves and could be up and running quickly**. And if we're willing to think bigger and more long term--and we should be--the potential of a twenty-first century rail system is truly astonishing. **In a study recently presented to the National Academy of Engineering, the Millennium Institute, a nonprofit known for its expertise in energy and environmental modeling, calculated the likely benefits of an expenditure of $250 billion to $500 billion on improved rail infrastructure.** It found that **such an investment would get 83 percent of all long-haul trucks off the nation’s highways by 2030**, **while also** delivering ample capacity for high-speed passenger rail and **offering substantial reduction to greenhouse gas emissions and oil use**. If high-traffic rail lines were also electrified and powered in part by renewable energy sources, that **investment would reduce the nation's carbon emission by 39 percent and oil consumption by 15 percent**. By moderating the growing cost of logistics, **it would also leave the nation's economy 10 percent larger by 2030** than it would otherwise be.

# **Inherency/Status Quo Fails**

#### Freight rail system currently will not be able to accommodate growth and lacks funding for improvements

ASCE, 10- American Society of Civil Engineers (“Report Card for America’s Infrastructure”, Executive Summary in Building America’s Future, February 2010, http://www.bafuture.org/sites/default/files/ASCU%20Report%20Card%20%20-%20Exec%20Summary.pdf)

A freight train is three times as fuel efficient as a truck, and traveling by passenger rail uses 20% less energy per mile than traveling by car. However, growth and changes in demand create bottlenecks that constrain traffic in critical areas. Freight and passenger rail generally share the same network, and a significant potential increase in passenger rail demand will add to the freight railroad capacity challenges. More than $200 billion is needed through 2035 to accommodate anticipated growth. Similar to the nation’s inland waterways, rail offers enormous economic and environmental potential, but few improvements have been made since 2005. This category again rates at a C-.

Budget deficits guarantee airport and highway funding will be prioritized over rail
Kuehn, 11- engineer from Dartmouth, 20+ years with railway experience, (Jason, “Why Freight Carriers Should Support HSR”, Oliver Wyman Transportation Thinktank, 5/31/11, http://rail.railplanning.com/files/2011/05/Why-Freight-Carriers-Should-Support-HSR\_final.pdf)

The pressures of record budget deficits in nearly all layers of government, and the perception that the rail industry is doing very well financially, has already tempted politicians and government agencies to impose indirect taxes for the public good. Burdening the industry with PTC and the grade separation conditions imposed by the STB on the CN/EJE merger would have been unthinkable in the 1970’s. With both federal and state governments facing funding crises for infrastructure, railroads can expect to see less funding of projects such as the Heartland, Crescent, and National Gateway Corridors and watch government money go to airports and highways, which are seen to benefit the voting public. Or they can help steer some of it to High Speed Rail projects. Some would argue that HSR projects in Illinois, Washington, and North Carolina benefit the freight carriers by reducing running times, while others would counter that the capacity added just preserves the existing freight capacity in the corridor. In the worst case things are neutral for freight carriers; in the best case they reap some benefits: - Better awareness of rail works for everyone’s benefit. Improvements to FAA infrastructure and airport facilities benefits both air freight as well as the primary targets – the passenger carriers - Many of the CREATE projects will benefit both freight and passenger trains, and those projects which benefit passenger trains seem to get funded more easily than the other projects in the program - Furthermore, dollars spent on passenger rail projects are dollars not spent on highway improvements to the benefit of the trucking industry.

Freight rail is disadvantaged in terms of government subsidies **AAR, 2008** (Overview of America's Freight Railroads, May 2008), AK
The overwhelming majority of U.S. freight railroads, including each Class I railroad and all but one regional railroad, are privately-owned and operated. **Major U.S. freight railroads receive relatively little government funding. By contrast, U.S. passenger railroads, and both passenger and freight railroads in nearly every other country, are heavily subsidized**. **The vast majority of the tracks over which U.S. freight railroads operate are owned, built, and maintained by the railroads themselves.** Each year, railroads invest billions of dollars to construct and maintain their tracks and other infrastructure, and pay hundreds of millions of dollars in property taxes on it. **By contrast, railroads’ primary competitors — trucks and barges — operate on publicly-provided highways and waterways, and enjoy huge subsidies from the government** and other highway and waterway users. Like all other privately-owned businesses, freight railroads must earn a reasonable profit to stay in business. Since 1980, when railroads were partially deregulated, rail profitability has improved from very low levels. Nevertheless, **railroads’ earnings have typically been insufficient to cover the total costs of their operations and provide a reasonable return on investment. In fact, freight railroads have consistently been in the bottom quartile of all U.S. industries in terms of profitability**. **Even in 2006 and 2007, when railroads had record traffic and earnings, the rail industry’s profitability was still below average compared to other industries.**

#### Railroads are in trouble – investment won’t keep up with demand CBO, 2006 (Congressional Budget Office, “Freight Rail Transportation: Long- Term Issues”, January 2006, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/70xx/doc7021/01-17-rail.pdf)

Long-Term Issues **Over the next 20 years**, if demand for rail transportation continues its rapid rise, t**he railroads will need to invest in new tracks and equipment to keep pace. At least two major transportation organizations have expressed concern about whether capacity will be sufficient to meet freight demand. The Transportation Research Board** (TRB, a unit of the National Academies) appointed a special committee to study potential problems. The committee **found that “Rail capacity constraints and recent service problems are discouraging** to the hopes of state and federal officials, environmentalists, and motorists that rail can relieve highways of part of the burden of truck traffic growth.” 10 The report further summarized concerns about rail capacity over the long run: **Taken together, the trends have indicated to many observers a pattern of unprecedented tight capacity in certain parts of the freight transportation system, expected continued growth of traffic, and slowing of the rate of addition of capacity in response to various external constraints.** 11 **The American Association of State Highway and Transportation Officials** (AASHTO) **also commissioned a study** of future rail capacity and demand. The resulting Freight-Rail Bottom Line Report examined the need for future highway investments under alternative assumptions about the potential contribution of railroads to meeting freight transportation demand. 12 **Based on what railroads had been spending on investment, it found that the railroad industry would be unable to generate enough funds for investment to maintain its current share of freight transportation**. 13 More recently, **a report issued by the Hudson Institute** expressed similar concerns, concluding that “**given little or no change in government programs and policies there are likely to be significant strains on the capacity of the national freight system over the next 10 to 20 years**.” 14 Among other sources of demand, the report noted that the growth in international trade may require better transportation service between ports and inland cities. 15

### AT: TIGER Grants Solving

#### TIGER grants aren’t solving – demand exceeds funds and only 12 percent of grants go to freight railU.S. DoT, June 25 (“US DoT Announces $10 Million TIGER Grant for Hunts Point Terminal Produce Market”, 2012, http://www.fra.dot.gov/roa/press\_releases/fp\_DOT68-12%20Hunts%20Point,%20New%20York.shtml)

**TIGER has enjoyed overwhelming demand since its creation, a trend continued by TIGER 2012.  Applications for this most recent round of grants totaled $10.2 billion, far exceeding the $500 million set aside for the program.  In all, the Department received 703 applications from all 50 states**, U.S. territories and the District of Columbia. The grants will fund a wide range of innovative transportation projects in urban and rural areas across the country: • **Of the $500 million in TIGER 2012 funds available** for grants, more than $120 million will go to critical projects in rural areas. • Roughly **35 percent of the funding will go to road and bridge projects**, including more than $30 million for the replacement of rural roads and bridges that need improvements to address safety and state of good repair deficiencies. • **16 percent of the funding will support transit projects** like the Wave Streetcar Project in Fort Lauderdale. • **13 percent of the funding will support high-speed and intercity passenger rail** projects like the Raleigh Union Station Project in North Carolina. • **12 percent will go to freight rail** projects, including elements of the CREATE (Chicago Region Environmental and Transportation Efficiency) program to reduce freight rail congestion in Chicago. • **12 percent will go to multimodal, bicycle and pedestrian projects** like the Main Street to Main Street Multimodal Corridor project connecting Memphis and West Memphis. • **12 percent will help build port projects** like the Outer Harbor Intermodal Terminal at the Port of Oakland. • Three grants were also directed to tribal governments to create jobs and address critical transportation needs in Indian country.

# **Economy**

#### We have multiple internal links to the economy – stimulus, jobs, business expansion, reduced costs and market competitiveness

**Corridors of Commerce, 2010** (“Benefits of the Rail: Economic Development”, 2010, http://www.tradecorridors.com/benefits-of-rail/economic-development/) ML

Investments in the Corridors of Commerce create: **Economic Stimulus** – **Every $1 invested in rail systems** (track, locomotives, bridges, etc.) **returns $3 to the American economy, according to the U.S. Department of Commerce. That’s a 200% return on investment**. **New Jobs**– **Collectively, the rail activity in the Corridors support over 162,000 jobs. One direct freight rail job supports another 4.5 jobs in factories, power plants, distribution centers and other businesses served by rail. The ripple effect of job creation continues throughout the economy**. **Business Expansion** Opportunities – **Rail transportation is an economic engine**. For example, the BNSF Alliance Intermodal Facility north of Fort Worth, Texas (on the TransCon and MidCon Corridors) is instrumental to the Alliance Global Logistics Hub which encompasses more than 200 separate companies with over 28,000 employees. Partnering with the State of Kansas, a similar logistics hub is planned south of Kansas City on the TransCon and is expected to generate, along with the separate independently-developed logistics park, over 13,000 jobs. **Reduced Costs for Companies** – **Rail transportation is one of the most cost-effective modes to move freight**. Supply chain costs rose for the first time in two decades, up 21% from 2003-2007 as percent of GDP (1.4 trillion in 2007). **Leveraging America’s freight railroads, the most affordable in the world, can mantain a competitive advantage for American businesses in the global marketplace**.

#### Freight transport key to economy

**RITA, no date** (Research & Innovative Technology Administration, “The Nation’s Freight”,http://www.bts.gov/publications/freight\_in\_america/html/nations\_freight.html**)**As the data in this report show**, the U.S. freight transportation system carries enormous quantities of goods and raw materials to support economic and industrial activities all across the nation and to meet consumer demands. The system also handles large volumes of goods traded internationally** and transported to and from the United States and places throughout the world. **Freight transportation touches every aspect of American economic life. Goods movement is increasingly part of a complex logistical system that serves an increasingly globalized economy. Transportation’s vital importance to the U.S. economy is underscored by the fact that more than $1 out of every $10 produced in the U.S.** gross domestic product **(GDP) is related to transportation** activity (USDOT BTS 2005).[3](http://www.bts.gov/publications/freight_in_america/html/end_notes.html#3)

#### Freight rail key to econ and keeping prices lowAshley, 2009 (Michael J. , Vice President of AAAM [Asset Allocation & Management Company] , “Railroads keep chugging along”, http://www.aamcompany.com/wp-content/uploads/Railroads-Keep-Chugging-Along.pdf)

**The transfer of goods across the United States is very reliant on the railroad industry. In turn, the health of the economy depends on the smooth operation of the rail system** which includes a 140,000 mile network and over 550 railroad companies. **Railroads move everything from the coal that is used to generate electricity to the grain that is used to make the cereal you eat every morning.** In fact, railroads move about 70% of the coal in the U.S. used to generate about 50% of the electricity in the U.S..1 **In an average year, rails ship 1.7 million car loads of agricultural products and another 1.5 million car loads of finished food products.2Railroads have the number one position in the shipping industry with a 43% share**.3We have seen an improving trend in railroad traffic as some economic trends have turned positive or at least stabilized (Exhibit 1 in original PDF). **Rail freight volume can be considered a leading indicator of economic activity as businesses begin to build inventories ahead of expected growth. Shipping by rail is the most cost effective way to move goods.** Post the Staggers Rail Act of 1980, which ended regulation of the industry, productivity has greatly improved. In 2008, U.S. railroads moved one ton of freight 457 miles per gallon of fuel.4 This makes **railroads two to three times more efficient than trucks. Much of the productivity enhancement was reflected in lower pricing which was passed on to the customer**. Railroad rates have increased at a much slower rate versus other costs assumed by the customer. For example, Exhibit 2 in the original PDF compares the increased cost for railroad services to other costs borne by the typical farmer. Using revenue per ton mile, average U.S. rail rates were down 49% from 1981 to 2008.5 That means the typical shipper can move twice the amount of goods at the same price it paid 25 years ago6.

#### **Federal freight rail investment creates great potential for economic development**

GAO, 2011 (Government Accountability Office, “Intercity passenger and freight rail”, http://www.gao.gov/new.items/d11290.pdf 2/2011) AW

*Economic development:* **The recent economic downturn has spurred interest in developing opportunities to preserve and create jobs in order to help promote economic recovery.** According to DOT, investment in intercity passenger and freight rail may aid in the short-term creation of jobs and potentially in the long-term development of higher density economic activity through concentrating retail and commercial business activity **near rail lines** or stations. Investment in intercity passenger and freight rail may be viewed as a potential avenue to generate economic development and produce wider economic impacts.49 Wider economic impacts associated with the investment in rail may include such things as added regional and national economic output and higher productivity and lower infrastructure costs. For example, investment in intercity high-speed passenger rail service could significantly influence the nature of regional economies beyond employment and income growth related to the investment in a rail system by spurring increases in business activity through travel efficiency gains. Moreover, the existence of new transport hubs and corridors creates the potential for economic development, as businesses may start to operate in the newly developed area in and around the rail corridor over the medium-term and the long-term.

#### Impact - 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.

#### Impact - economic growth prevents global escalatory conflicts

Mathew J. Burrows (counselor in the National Intelligence Council (NIC), PhD in European History from Cambridge University) and Jennifer Harris (a member of the NIC’s Long Range Analysis Unit) April 2009 “Revisiting the Future: Geopolitical Effects of the Financial Crisis” http://www.twq.com/09april/docs/09apr\_Burrows.pdf

Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that the Great Depression is not likely to be repeated, the lessons to be drawn from that period include the harmful effects on fledgling democracies and multiethnic societies (think Central Europe in 1920s and 1930s) and on the sustainability of multilateral institutions (think League of Nations in the same period). There is no reason to think that this would not be true in the twenty-first as much as in the twentieth century. For that reason, the ways in which the potential for greater conflict could grow would seem to be even more apt in a constantly volatile economic environment as they would be if change would be steadier. In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorist groups that remain active in 2025, however, the diffusion of technologies and scientific knowledge will place some of the world’s most dangerous capabilities within their reach. Terrorist groups in 2025 will likely be a combination of descendants of long established groupsinheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attacksand newly emergent collections of the angry and disenfranchised that become self-radicalized, particularly in the absence of economic outlets that would become narrower in an economic downturn. The most dangerous casualty of any economically-induced drawdown of U.S. military presence would almost certainly be the Middle East. Although Iran’s acquisition of nuclear weapons is not inevitable, worries about a nuclear-armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship that existed between the great powers for most of the Cold War would emerge naturally in the Middle East with a nuclear Iran. Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual-capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack. The lack of strategic depth in neighboring states like Israel, short warning and missile flight times, and uncertainty of Iranian intentions may place more focus on preemption rather than defense, potentially leading to escalating crises Types of conflict that the world continues to experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo-mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if government leaders deem assured access to energy resources, for example, to be essential for maintaining domestic stability and the survival of their regime. Even actions short of war, however, will have important geopolitical implications. Maritime security concerns are providing a rationale for naval buildups and modernization efforts, such as China’s and India’s development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. Buildup of regional naval capabilities could lead to increased tensions, rivalries, and counterbalancing moves, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. With water also becoming scarcer in Asia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult both within and between states in a more dog-eat-dog world.

# **Environment**

### Trucking Now

#### Freight overwhelmingly travels by truck nowRITA, no date (Research & Innovative Technology Administration, “The Nation’s Freight”, http://www.bts.gov/publications/freight\_in\_america/html/nations\_freight.html)

According to the composite estimates, **trucking as a single mode was the most frequently used mode, accounting for an estimated 70 percent of the total value, 60 percent of the weight, and 34 percent of the ton-miles**.[19](http://www.bts.gov/publications/freight_in_america/html/end_notes.html#19) In 2002, the trucking industry, both for-hire and private own-use, transported over $9 trillion worth of shipments, weighing over 11 billion tons and generating about 1.5 trillion ton-miles (table 3). Measured by ton-miles, trucking was **followed by rail at 31 percent**, pipeline at 15, and water with 11 percent. Trucking’s modal share by ton-miles has grown as manufacturing and services, rather than bulk commodity producing sectors such as agriculture and mining, have increased their combined share of the nation’s economic activities. Manufactured goods tend to be higher in value per ton than farming and mining products (e.g., grain and coal). **In recent years, as trucking maintained its dominance, the number of trucks traveling on the nation’s highways steadily increased** and the truck fleet mix changed. While two-axle single-unit trucks are the most common commercial trucks on the nation’s roads, the number of larger combination trucks grew at a much faster rate, increasing about 59 percent over this period, compared to 30 percent for single-unit trucks ([figure 7](http://www.bts.gov/publications/freight_in_america/html/figure_07.html)). In 2003, combination trucks accounted for 28 percent of the commercial truck fleet, up from 24 percent in 1980. These larger trucks also travel more miles per vehicle than the single-unit trucks. Combination trucks generated a total of 138 billion vehicle-miles of travel (VMT) in 2003, compared to 78 billion miles by single-unit trucks ([figure 8)](http://www.bts.gov/publications/freight_in_america/html/figure_08.html). Since 1980, overall truck vehicle-miles have doubled from 108 billion to 216 billion in 2003. Despite this growth in truck VMT, commercial truck’s share of total highway vehicle-miles remained steady, hovering between 7.1 and 7.5 percent over this period. This was primarily because travel by all highway vehicles, including passenger cars, buses, and light trucks (e.g., pickup trucks, sport utility vehicles, and minivans) also grew at a similar pace.

### Rail Shifting to Trucks Now

#### Poor rail infrastructure is causing a shift to trucksGallagher, 2004 (John, Traffic World, “Fraying Supply Chain”, Aug 2, accessed via ProQuest)

Long-haul **trucking companies were struggling to maintain drivers and equipment needed to pull freight even before poor rail service began adding to their problems**. **Union Pacific Railroad has been staving off a meltdown** since the beginning of the year when it"s own labor shortage crisis began slowing system velocity. **The nation"s largest rail carrier pulled premium UPS freight off its system** back in April **to help maintain fluidity, and major LTL carriers have started doing the same. "We"ve had to take more and more freight off the rail and put it on the road,**" said Bill Zollars, Yellow Roadway chairman, president and CEO. "**There has been no sign of improvement. It"s been consistently lousy for months."** It has forced some of its shippers to temporarily halt production at manufacturing sites. However, one shipper said that the loss of a production shift had a "modest impact" in terms of lost productivity, according to Bear Stearns analyst Ed Wolfe. **But inadequate railcar availability for finished products was having a significant cost impact**, according to another shipper.

### Carbon Internal

#### **Freight rail transportation produces 70% fewer emissions than trucks – its key to a low carbon economy**

Freight on Rail 12- partnership of the rail freight operators, Rail Freight Group, Network Rail, the transport trade unions and Campaign for Better Transport (“Rail freight is breaking out of its traditional markets into consumer business”, Freight On Rail Sustainability Journal, http://www.freightonrail.org.uk/FactsFigures.htm) ALT

Rail freight has a key role to play in the low carbon economy as rail produces 70% less carbon dioxide emissions than the equivalent road journey and a gallon of diesel will carry a tonne of freight 246 miles by rail as opposed to 88 miles by road. Rail freight is breaking out of its traditional markets into consumer business The amount of freight moved in 2010‐11 was 19.23 billion net tonne kilometres, a 1.0 % increase from 2009‐10. The total amount of freight moved increased by 14.0% in 2010‐11 Q4 compared to 2009‐10 Q4, with 5.34 billion net tonne kilometres moved compared to 4.69 billion net tonne kilometres moved in 2009‐10 Q4. Last year for the first time, consumer rail freight traffic was greater than coal traffic; Despite the recent economic downturn, rail freight volumes grew by 2% between 2006-2011, and over the same period, consumer rail freight grew by 29%, exceeding previous forecasts its eighth consecutive year of growth. There is significant suppressed demand for rail freight with forecasts predicting that rail freight overall will have doubled by 2030 with consumer rail freight growing 7.6% per annum during this period.

#### Rail emissions are negligible compared to other forms of transportation

**AAR 08** (Association of American Railways, “Overview of America’s Freight Railways”, May 2008, http://www.aar.org/PubCommon/Documents/AboutTheIndustry/Overview.pdf) EB

**The U.S.** Environmental Protection Agency **(EPA) estimates that for every ton-mile, a typical truck emits roughly three times more nitrogen oxides and particulates than a locomotive**. **Other studies suggest trucks emit six to 12 times more pollutants per ton-mile than do railroads**, depending on the pollutant measured. **Railroads also have a clear advantage in terms of greenhouse gas emissions**. According to the EPA, **railroads account for just 9 percent of total transportation-related NOx emissions and 4 percent of transportation-related particulate emissions, even though they account for 42 percent of the nation's intercity freight ton-miles.**

 **Freight trains are 3x cleaner than trucks**

**Hamberger 09** - president and CEO of the Association of American Railroads (Edward, “Hamberger: Freight Trains Aid Economy, Environment, July 9, 2009, http://www.rollcall.com/features/Mission-Ahead\_Highways-and-Skyways/ma\_transportation/-36644-1.html) EB

**Freight trains also reduce pollution.** The Environmental Protection Agency says **locomotives are on average three times cleaner than trucks. Greenhouse gas emissions would fall by 12 million tons annually if just 10 percent of the long-haul freight moving on the highways instead moved by rail. New technology is making locomotives even cleaner, reducing idling, improving fuel mileage and reducing harmful emissions.**

#### Rail has enormous potential to reduce GHG emissions

**Longman, 2009** – Senior research fellow with New America Foundation, Schwartz senior fellow at Washington Monthly, senior writer and deputy assistant managing editor at U.S. News & World Report, graduate of Oberlin College, fellow at Columbia University (Phillip, “Back on Tracks”, The Washington Monthly, January/February 2009, http://www.newamerica.net/publications/articles/2009/back\_tracks\_9914)

**The Environmental Protection Agency calculates that for distances of more than 1,000 miles, a system in which trucks haul containers only as far as the nearest railhead and then transfer them to a train produces a 65 percent reduction in both fuel use and greenhouse gas emissions. As the volume of freight is expected to increase by 57 percent between 2000 and 2020,the potential economic and environmental benefits of such an intermodal system will go higher and higher**. Railroads are also potentially very labor efficient.Even in the days of the object-lesson train, when brakes had to be set manually and firemen were needed to stoke steam engines, a five-man crew could easily handle a fifty-car freight train, doing the work of ten times as many modern long-haul truckers.

#### Link magnifier - half the carbon footprint of goods is from transportation – Asia study proves

Carter, 12- Associate Vice President for IDC Asia/Pacific and leads IDC's Asia/Pacific Green IT & Sustainability research practice (Philip, “DHL Uses Rail to Cut Carbon Emissions”, Environmental Leader, 4/18/12, http://www.environmentalleader.com/2012/04/18/dhl-uses-rail-to-cut-carbon-emissions/) ALT

The shift from roads to rail is one component of DHL’s company-wide goal to cut emissions 30 percent (from a 2007 benchmark) by 2020. **Since launching its GoGreen initiative** several years ago, **the company has installed IT systems to collect information on carbon outputs at all points in the supply chain** and process it automatically. In July 2011, DHL created the GoGreen Carbon Dashboard, a service for its freight customers to track carbon emissions from the company and third-party sources. It also worked to improve efficiency with the installation of more accurate fuel gauges in its trucks and added 30 electric vans and 50 hybrid trucks to its Manhattan fleet. The company has tested the efficiency of its rail transport network since April 2011. This month DHL Global Forwarding said it will officially move from road to its rail network for consolidated freight containers going from its shipment facility in Bremen to the terminals of shipping companies in Hamburg and Bremerhaven. The container redistribution facility in Bremen, where some 7,500 consolidated freight containers are transported to terminals each year, is one of the company’s most important sea freight transhipment centers in Europe. Jürgen Klenner, vice president of strategy and business at DHL Global Forwarding, said as much as 50 percent of a product’s carbon footprint is generated in the course of transportation.

#### Investing in freight transportation cuts emissions more than passenger rail investment

Boer et al 11- PhD in Chemical Technology, study released by international coalition of transportation experts (Eelco, Huib van Essen, Femke Brouwer, Enrico Pastori, Alessandra Moizo, “Potential of modal shift to rail transport: Study on the projected effects on GHG emissions and transport Volumes”, March 2011, http://www.cer.be/media/2189\_Modal%20shift%20study%20final.pdf) ALT

Also in passenger transport, rail may have a significant potential for growth. However, the potential growth of rail passenger transport is less well documented in the literature. One study estimates that in 2030 rail passenger traffic could have more than doubled compared with the baseline scenario for that year. This significant growth is calculated under the assumption that rail transport further improves its competitiveness with private car transport in terms of speed and costs on links where private car transport is currently more competitive. This requires improved rail supply factors and instrumented political support. For this scenario, too, further research is needed to define the required policies and increased services supply by the rail sector for achieving the potential. In the passenger transport market the greatest potential for growth lies in high-speed rail, as an alternative to air transport, and in the segment of local and regional business trips. An assessment of the available infrastructure capacity shows that around 30 40% growth in train-kilometres in 2020 can be accommodated by existing infrastructure compared with the baseline for the same year. **The potential growth of freight and passenger transport depends on the allocation of the available train-km. Under a 50/50% allocation, by 2020 rail freight traffic could grow by 39% on the primary network and 83% on the network as a whole. Passenger transport could grow by 14 and 23%, respectively.** If growth will be concentrated on the corridors only, the growth potential is more limited. The average green house gas reduction potential of a modal shift in freight transport is higher than in the case of passenger transport, since the difference in emissions per unit volume is higher for freight.

### **Efficiency Internal**

#### **Rail is the most environmentally friendly mode of transport – two reasons, efficiency and energy form**

UNEP, 02- United Nations Environmental Program, (Industry as a Partner for Sustainable Development”, International Union of Railways, 2002, http://www.unep.fr/scp/csd/wssd/docs/sectors/final/railways.pdf) ALT

The energy use in rail transport depends on the energy efficiency. The high energy efficiency, as mentioned in the introduction, is a main environmental characteristic of rail transport systems. On a modal level, the typical direct energy use per person-kilometre for rail transport is in the range of three to five times less than for air transport. Freight transport by rail uses four to six times less direct energy per tonne-kilometre than lorry transport (INFRAS/IWW). Only transport at sea is comparable in energy efficiency to rail freight transport. Even though rail is more energy efficient than most other transport modes, significant efforts are made on the company level in the last decade to reduce the energy use further. Measures, such as energy-saving programmes are established for reducing the energy consumption in a variety of different ways. The energy efficiency of rail transport can also be improved by increasing the capacity of the systems. Double deck trains are not new, and are used to a large extent in both freight and passenger rail transport particularly in the United States. However rail companies in other parts of the world are making efforts in developing this concept further to increase the rail capacities (box 9). The energy form, whether in the form of electricity or combustible fuels, is the second main aspect of energy use connected to rail transport. The electricity can also be produced by different energy sources, either in the form of renewable hydro- and wind-power, combustion of renewable biomass, combustion of non-renewable fossil coal, oil and gas, or from nuclear fission. Worldwide, approximately 60% of the person transport and approximately 80% of the freight transport use non-renewable diesel fuel. Alternatives to diesel fuel produced from renewable raw material are utilised to reduce the fossil fuel dependence of rail transport. Some railway companies, for example in the United States, are conducting studies into using fuels derived from biological raw material, such as bio-diesel. In this case oils from rape, soybean, or sunflower seeds are esterified to bio-diesel, which in addition to being based on renewable energy sources, also have environmental benefits such as reduced emissions.

#### Rail transport is way more efficient than truck transport but congestion reduces the advantage

Department of Transportation 09- (“Comparative Evaluation of Rail and Truck Fuel Efficiency on Competitive Corridors”, released by ICF International consulting firm, 11/19/09, http://www.fra.dot.gov/Downloads/Comparative\_Evaluation\_Rail\_Truck\_Fuel\_Efficiency.pdf) ALT

Finding 1: Rail is more fuel efficient than truck on all 23 movements. For all movements, rail fuel efficiency is higher than truck fuel efficiency in terms of ton-miles per gallon. The ratio between rail and truck fuel efficiency indicates how much more fuel efficient rail is in comparison to trucks. Finding 2: Double-stack trains and dry van trailers are the predominant equipment types in this study. Double-stack trains account for 11 out of 23 rail movements, while dry van trailers are the equipment of choice for 12 truck movements. Double-stack service has become more predominant in the past two decades due to their fast and reliable transit times, while 53-foot dry vans provide large capacity while utilizing tractor aerodynamic aids that reduce fuel consumption. Exhibit 1-2 illustrates the distribution of equipment types across rail and truck movements. Finding 3: There is a strong correlation between rail-truck fuel efficiency ratio and equipment type. Exhibit 1-3 provides the range of rail-truck fuel efficiency ratio by rail equipment type. 3 The tank car movement resulted in the highest ratio, followed by double-stack, covered hopper, and gondola movements. Auto rack movements resulted in the lowest ratios. The wide variation in rail-truck fuel efficiency ratios in double-stack movements is a result of the higher number of double-stack movements considered in this study. Finding 4: **The range of rail fuel efficiency is wider than the range of truck fuel efficiency**. Exhibits 1-4 and 1-5 illustrate the range of rail and truck fuel efficiency across all movements included in this study**. Rail fuel efficiency has a much wider range, varying from 156 to 512 tonmiles/gallon, while truck fuel efficiency ranges from 68 to 133 ton-miles/gallon**. Finding 5: The variation in rail fuel efficiency is narrower if analyzed in terms of trailing ton-miles per gallon. Rail fuel efficiency can be measured at the train level in trailing ton-miles per gallon. Exhibit 1-6 illustrates the range of trailing ton-miles per gallon for different types of trains, and the most fuel efficient train is about 2.3 times more fuel efficient than the least fuel efficient train. In contrast, the ratio between the highest and the lowest fuel efficiencies measured in lading ton-miles per gallon at the car level is 4.2. Double-stack trains tend to be more fuel efficient than other types of trains, despite their higher average speeds and poorer aerodynamic performance. The fact that intermodal operations do not require subsequent switching operations to classify rail cars contributes to the better performance of double-stack trains. The wide variation in fuel efficiency of double-stack and mixed trains as opposed to auto and TOFC trains is justified by the smaller number of movements analyzed in the latter trains. Finding 6: Fuel savings from using rail can be significant. Rail results in fuel savings when compared to their counterpart truck movement, ranging from 18 to 1,108 gallons per carload. Because the range of variation in fuel savings is more dependent on route distance than equipment type, Exhibit 1-7 illustrates the range of savings by distance segments. Fuel savings can also be analyzed at the train level. For example, if trucks were to carry the equivalent payload included in the double-stack rail movements, fuel savings would evidently be much greater, varying from 1,549 to over 80,000 gallons per double-stack train. Finding 7: Congestion has an effect on fuel efficiency. Some rail movements were modeled with and without consideration of current traffic levels on the rail segments traveled, and the fuel consumption between the opposed (with rail traffic) and unopposed (without rail traffic) simulations ranged from 0.7 to 3.6%. Although this study did not include a sensitivity analysis of different road levels of service on truck movements, previous research has indicated that truck fuel economy can be reduced quite dramatically as the road level of service deteriorates.

#### Freight trains have a very high fuel efficiency and improving

**Hamberger 09** - president and CEO of the Association of American Railroads (Edward, “Hamberger: Freight Trains Aid Economy, Environment, July 9, 2009, http://www.rollcall.com/features/Mission-Ahead\_Highways-and-Skyways/ma\_transportation/-36644-1.html) EB

And **freight trains conserve energy**. In 2008, **freight trains were able to move a ton of freight an average of 457 miles on a gallon of diesel fuel, more than three times as far as a truck can move it.** Just **since 1980, railroads have improved their fuel efficiency by 80 percent. If just 10 percent of long-haul truck tonnage moved instead by rail, the nation could save more than 1 billion gallons of fuel annually.**

### Air Transport Bad

#### Air pollution from the aviation industry leads to climate change, ocean acidification and loss of biodiversity

**Kol, 2012 –** Writer for the New Straits Times (Goh, “Aviation Impact on the Environment”, New Strait Times, February 16, 2012, <http://www.nst.com.my/channels/niexter/aviation-impact-on-environment-1.47093?localLinksEnabled=false> //GKoo

The contrail from an **aircraft** engine is formed by the combustion of precious fuels that **release harmful carbon dioxide and greenhouse gases into our atmosphere.** This is **bound to accelerate global warming and ocean acidification**. With global warming on the rise, warmer water in the ocean is causing tropical storms. **Droughts and wildfires will also become worse, and so will the intensity of rainstorms. Ocean acidification leads to marine-life destruction. Reef-forming corals that are home to vulnerable sea-dwellers, algae and phytoplankton – the very fundamentals of the oceanic food web** **– will become useless** due to their inability to adapt to small changes in pH. In a nutshell, **the climate changes and air pollution caused by the aviation industry pose a danger to the balance of Earth’s biodiversity.**

#### Aviation contributes substantially to global warming

**Capoccitti, Khare, Mildenberger 10 –** Manager/Sales & Strategy for Air Canada, Chair/professor of the Dept of Finance, Economics & Operations Management at Athabasca University, PhD Business Administration/Economics and law from Johannes Gutenberg-Universitat Mainz (Sam, Anshuman, Udo, “Aviation Industry – Mitigating Cliate Change Impacts through Technology and Policy,” Journal of Technology management & innovation, 2010, http://www.scielo.cl/scielo.php?pid=S0718-27242010000200006&script=sci\_arttext)//JS

However, **the aviation industry is not immune to the impact it has on climate change**. **As the aviation skies continue to crowd so does the impact of CO2 emissions**. The aviation industry is responsible but for a small but growing proportion of GHG emissions. **Aircraft are responsible for around three percent of global carbon dioxide emissions. But emissions of nitrous oxides** (NOx) **and the formation of condensation trails** (contrails) **from water vapour** at near stratospheric levels where commercial jets fly **mean the actual impact on global warming is much higher *-*possibly as much as ten percent** (GLOBE-Net, 2007). **Air Travel is the world's fastest growing source of greenhouse gases like carbon dioxide, which cause climate change.** Globally the world's commercial jet aircraft fleet generates more than 700 million tons of carbon dioxide (CO2), the world's major greenhouse gases, per year. **One person flying a return trip between Europe and New York generates between 1.5 and 2 tons of CO2. This is approximately the amount a European generates at home for heating and electricity in one year** (GreenSkies, n.d). Crowded skies translate to more flights which equates to more consumption and waste. **Consuming more in the aviation industry equates to more greenhouse gas emissions which negatively adds to global warming.** North America and Europe are at greatest risk as 70 to 80 % of all global flights operate within these two regions (GreenSkies, n.d.; pg.2; Kirby, 2008; pg. 32). Aviation is responsible for 2% of global CO2 emissions and by 2050 is predicated to represent 3% (IATA, 2008). Further, as more people in countries like China are able to afford airline tickets, worldwide air tourism travel is bound to increase. Most experts believe that air travel could double within fifteen years if current trends persist. **By 2050, the Intergovernmental Panel on Climate Change (IPCC) believes that aircraft could account for up to 15% of the global warming impact from all human activities** (GLOBE-Net, 2007). Just like consumption of more goods demands a lot of energy, getting from one place to another does too. Transportation as an industry consumes about 20% of the global energy supply, 80% of which comes from fossil fuels. He states that 80% of transport-related greenhouse gas emissions come from road transport. Seven percent is related to sea transport and 0.5% is attributed to rail. Air transportation is the second largest with a 13% share of transport-related greenhouse gas emissions (Kirby, 2008; pg. 35-36). Aviation plays a vital role in society as demonstrated above; it generates jobs and supports commercial and private travel. However one of the negative impacts of travel is its environmental impact associated with local noise and air pollution. A number of aircraft emissions can affect climate, carbon dioxide (CO2), Nitrogen oxides (NOx), and water (H2O) do so directly.

#### Air transport substantially contribute to climate change

Walsh, 2007 – Editor of TIME magazine (Bryan, “Does Flying harm the Planet”, TIME World, August 20, 2007, http://www.time.com/time/world/article/0,8599,1654488,00.html) // GKoo

Even as carbon emissions from air travel grow rapidly, scientists are investigating claims that they may double the warming effect because of the altitude at which they're emitted. As jets soar they leave behind contrails, vapor threads of condensation that can persist for hours, especially in colder areas, and behave like high-altitude cirrus clouds. Those clouds seem to have a net warming effect, trapping heat in the atmosphere. Planes also create ozone, a greenhouse gas that has a stronger warming effect at high altitudes than low. The science is still being nailed down, but the side effects of high-altitude emissions could double air travel's contributions to global warming, says Dan Lashof, science director for the Natural Resource Defense Council's Climate Center.

#### Aviation is a significant contributor to climate change

IBRD, 2012 – it’s the world bank dude (“Air Transport and Energy Efficiency”, The International Bank for Reconstruction and Development, February 2012, http://siteresources.worldbank.org/INTAIRTRANSPORT/Resources/TP38.pdf )//GKoo

Aviation has always caused environmental concerns. Initially, the focus of concern was on aviation noise and, for decades now, the industry has been working to reduce noise. According to Boeing and Airbus, aircraft are on average 50 percent quieter today than they were 10 years ago. It is estimated that the noise footprint of each new generation of aircraft is at least 15 percent lower than that of replaced aircraft. In recent years, the impact of aviation greenhouse gas emissions on the environment has been of increasing concern. Aviation produce approximately 2 percent of global Carbon Dioxide (CO2) emissions, according to the United Nations Intergovernmental Panel on Climate Change (IPCC 2007). Given the strong growth rate that aviation has enjoyed and will continue to enjoy in the future, as was discussed in the previous chapter, these concerns are justified. Four kinds of gases make up the main emissions from aviation: carbon dioxide (around 70 percent of total emissions), water vapor (around 30 percent), nitrogen oxide and sulfur oxide (less than one percent). In 2006, aviation emitted 810 million tons of CO2, which represents 12 percent of all transport CO2 emissions that year. The OECD forecasts that air transport CO2 emissions will grow to 23 percent of transportation CO2 emissions by 2050 if no measures are taken (Anming Zhang 2009).

#### Prefer our evidence – We assume aviation’s total impact on climate change

**Allen & Lichman 09 –** Law firm practicing airport development law and litigation emphasizing environmental matters (“Why the Airports and the Aviation Industry Need to Be Concerned About Climate Change: Part One, Facts about Aviation and Climate Change,” Aviation & Airport Development Law News, 9/24, http://www.aviationairportdevelopmentlaw.com/2009/09/articles/faa-1/regulatory/why-the-airports-and-the-aviation-industry-need-to-be-concerned-about-climate-change-part-one-facts-about-aviation-and-climate-change/#more)//JS

In *Aviation and Climate Change: the Views of Aviation Industry Stakeholders*, the aviation industry makes several claims regarding the impact aviation has on climate change. First, the industry claims that “over the past four decades, we have improved aircraft fuel efficiency by over 70 percent, resulting in tremendous savings.” As a result, the industry continues, “given the significance of fuel costs to the economic viability of our industry, our economic and environmental goals converge.” Second, the industry claims that “because of our aggressive pursuit of greater fuel efficiency, greenhouse gas (GHG) emissions from aviation constitute only a very small part of total U.S. GHGs, less than 3 percent.” However, in order to assist the industry in its obligation “to further limit aviation’s greenhouse gas footprint even as aviation grows to meet rising demand for transportation around the world,” those claims of progress need to come under a microscope. First, how much aviation contributes to climate change is still up to debate. Several governmental and aviation industry organizations have been reporting a “less than 3%” number for quite some time while environmental groups, particularly in Europe, claim that the percentage is anywhere from 5 to 9%. In examining the claims and counterclaims concerning emissions of GHG, one has to be very careful about the language and the metrics used in determining the “impact” any given industry will have on “climate change.” Many reports and studies focus only on CO2, since the amount of CO2 produced both naturally and by humans is overwhelming. However, as just about everyone knows by now, there are other gases and anthropogenic actions that exacerbate climate change. For example, the U.S. EPA recently proposed regulations that would require major emitters of six “greenhouse gases” to report their emissions to the EPA on an annual basis. Those six greenhouse gases are: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6), hydrofluorocarbons (HFCs), perfluorochemicals (PFCs), and other fluorinated 20 gases (e.g., nitrogen trifluoride and hydrofluorinated ethers (HFEs)). It also should be kept in mind when discussing climate change, especially with respect to aviation, that water vapor is estimate contribute anywhere from 36% to 72% of the greenhouse effect. This is important because the [radiative forcing effect](http://en.wikipedia.org/wiki/Radiative_forcing) of cirrus cloud formation from the aircraft is a significant contributor to the greenhouse effect. As pointed out above, it is generally accepted that for aviation the GHGs of concern are CO2, nitrogen oxides (NOx), aerosols and their precursors (soot and sulfate), and increased cloudiness in the form of persistent linear contrails and induced-cirrus cloudiness.  The predominance of CO2 as the GHG of concern leads to another issue: measurement of GHG. Many reports state their findings in terms of “[CO2e](http://en.wikipedia.org/wiki/CO2e),” or CO2 equivalent. Carbon dioxide equivalency is a quantity that describes, for a given mixture and amount of greenhouse gas, the amount of CO2 that would have the same global warming potential (GWP), when measured over a specified timescale (generally, 100 years). For example, the generally accepted GWP for methane over 100 years is 25 and for nitrous oxide 298. This means that emissions of 1 million metric tons of methane and nitrous oxide, respectively, is equivalent to emissions of 25 and 298 million metric tons of carbon dioxide. This article will keep the convention of designating GHG other than CO2 in terms of “CO2e.” Most reports and studies begin with the groundbreaking work of the [United Nation Intergovernmental Panel on Climate Change (IPCC)](http://www.ipcc.ch/ipccreports/sres/aviation/index.php?idp=0), which, in 1999 estimated that, based on earlier data, fuel combustion for aviation contributes approximately 2% to the total anthropogenic CO2 emissions inventory, and, if left unmitigated, this could grow to as much as 4% by 2050. Despite the age of the data, the 2% number has been used consistently throughout the first decade of the 21st century. The International Air Transport Association (IATA) in a 2006 press release relied on IPCC report by stating that “[a]ir transport contributes a small part of global CO2 emissions – 2%.” IATA press release , 2ndAviation Environment Summit. Even as recently as September, 2009, the Transportation Research Circular of the Transportation Research Board fudges the issue by stating in the section about climate change and greenhouse gases that “fuel combustion for aviation contributes approximately 2% to the total anthropogenic CO2 emissions inventory.” What these estimates leave aside is the fact that CO2 emissions are only one facet of the greenhouse gas equation.  The aviation industry tried to correct this in its paper *Aviation and Climate Change: Views of Aviation Industry Stakeholders*, published in February, 2009, by stating that “greenhouse gas (GHG) emissions from aviation constitute only a very small part of total U.S. GHGs, less than 3 percent.” However, the report that the paper cites to, the U.S. EPA’s[*Inventory of Greenhouse Gas Emissions and Sinks: 1990-2006*](http://www.epa.gov/climatechange/emissions/downloads/08_CR.pdf)(April 15, 2008) (2008 EPA Inventory), only mentions emissions of CO2 in its discussion of its inventory of greenhouse gases in the creation of energy. *See,* 2008 EPA Inventory, Chapter 3. Moreover, the EPA only examined the aviation sector’s combustion of fossil fuel, and did not, for example, take into account the radiative forcing effect of cirrus cloud formation has on climate change. When the EPA published its next inventory, [*Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007*](http://epa.gov/climatechange/emissions/downloads09/InventoryUSGhG1990-2007.pdf), (March 2009) (2009 EPA Inventory), the contribution of aviation to carbon dioxide emissions increased. It estimated that when international fuels were included, domestic and international commercial, military, and general aviation flights represented about 3.4 percent of the total emissions of CO2 in United States.  There is no question that the emission of CO2, and, for that matter, the combustion of fossil fuels, does not tell the whole story with respect to aviation. However, there are relatively few studies that focus solely on aviation and examine the effects of all GHGs and not just CO2. In 2005, Robert Sausen and a group of climate scientists published their article [*Aviation Radiative Forcing in 2000: An Update on IPCC (1999)*](http://docserver.ingentaconnect.com/deliver/connect/schweiz/09412948/v14n4/s13.pdf?expires=1253404014&id=52115010&titleid=1292&accname=Guest+User&checksum=75615ECAA9267BF5069293C288D77FDF) (Sausen 2005). That article concluded that when NOx emissions, contrails and cirrus clouds are added into the mix, aviation’s impact on climate change is about 2 to 5 greater than that of CO2 alone worldwide. This would mean that aviation would have an impact on climate change in the range of 4% to 10% when all aspects of emissions of GHG and other radiative forcing factors are taken into account. These numbers were updated in a July, 2009, article *Aviation and Global Climate Change in the 21st Century*(Lee *et al.*, 2009) which appeared in the periodical [*Atmospheric Environment*](http://www.elsevier.com/wps/find/journaldescription.cws_home/246/description#description)*.*The authors, a group of atmospheric scientists, concluded that when aviation-induced cirrus radiative forcing is included, aviation represents 4.9% of total anthropogenic “radiative forcing of climate.” While these studies are not United States specific, as the EPA inventories are, since these studies consider all GHGs emitted by aviation (not just carbon dioxide), are focused entirely on the climate effect of aviation, and are based more recent data, the conclusion that aviation contributes close to 5% of climate change is more accurate than the “under 2%” used by many in the aviation industry.

#### Tipping point coming, short term aviation emissions outweigh any other sources

Clark, 2012 - a consultant editor on the Guardian environment desk. He has written and edited a number of books on environmental and technology topics as well as working at BBC Worldwide (Duncan, “The surprisingly complex truth about planes and climate change “, The Guardian, September 9, 2010, <http://www.guardian.co.uk/environment/blog/2010/sep/09/carbon-emissions-planes-shipping>) // GKoo

We hear much about the environmental costs of air travel. As [our recent Q&A](http://www.guardian.co.uk/environment/2010/apr/06/aviation-q-and-a) explained, the problem is not just that planes burn a lot of fuel and therefore kick out plenty of CO2 per passenger. Just as important are a host of other high-altitude impacts, including vapour trails and ozone production, that are usually estimated to cause as much warming as the CO2 itself. Hence we often hear that although air travel accounts for only a small fraction of global emissions (relatively few people can afford to fly), one transatlantic flight can add as much to your carbon footprint as a typical year's worth of driving. Surely it couldn't get any worse, could it? Unfortunately for green-minded air travellers, it just did. Kind of. The wrinkle, always vaguely understood by climate geeks but finally explored in depth in a [recent scientific paper](http://pubs.acs.org/doi/full/10.1021/es9039693), is that the relative impact of different types of travel depends not just on practical factors such as engine efficiency and occupancy rates, but also on something altogether more abstract: the time frame you care about. The reason this is so crucial is that the effects of different greenhouse gases play out in the atmosphere at a different speeds. CO2, released by all fuel-burning vehicles, can remain in the air for centuries, causing a gentle warming effect. By contrast, most other gases and impacts – such as the vapour trails and tropospheric ozone produced by planes at altitude – cause much more potent but shorter-lived bursts of warming. If you'll forgive an extension to the "frying the planet" metaphor, generating global warming with CO2 is equivalent to slow-cooking the earth in a cast-iron skillet, whereas cooking the planet with vapour trails would be more like flash-frying it in an extra-hot wok. In order to tot up these differently paced warming impacts into a single carbon footprint number for a flight or any other activity, it's necessary to decide what time frame you're talking about. Conventional wisdom is to add up the total warming impact of all the different greenhouse gases over the period of a century to create a nice, round but ultimately arbitrary number. If, by contrast, we shifted the focus to a much shorter time period – which arguably would make more sense, given that the next decade or so could turn out to be make-or-break in terms of avoiding climate tipping points – then the impact of vapour trails and other short-lived impacts look massively more significant. At risk of over-stretching the frying-pans analogy, the flash-fry wok may be more likely to cause a disastrous kitchen fire than the slow-cook skillet, even if they both use the same amount of heat overall. The new paper, published in the journal [Environmental Science and Technology](http://pubs.acs.org/journal/esthag), finally pins some numbers on all this theory by examining the impact over different time periods of various different modes of transport. The results are illuminating. According to the paper, if we focus just on the impact over the next five years, then planes currently account for more global warming than all the cars on the world's roads – a stark reversal of the usual comparison. Per passenger mile, things are even more marked: flying turns out to be on average 50 times worse than driving in terms of a five-year warming impact.

# Ethanol Add-On

#### Freight rail key to growth of ethanol industry and reducing GHG emissions

Department of Agriculture 11 (“Railroads help keep U.S. farmers competitive in the global marketplace”, released through Freight Rail Works Association, 2011, http://freightrailworks.org/frw-all-print.pdf) ALT

U.S. freight railroads are a critical component in the movement of America’s energy sources and ethanol is no exception. Each of the seven major railroads transport ethanol, with some serving several dozen plants. Railroads moved more than 281,000 carloads of ethanol in 2010, up 608 percent from 2000. As demand for this green fuel rises in the coming years, demand for the greenest, most cost-effective mode of freight transportation rises with it. Railroads are essential to the transportation of ethanol and also to the movement of a major byproduct of ethanol production, dried distillers grains. Dried distillers grains are most commonly used for animal feed. As rail carloads of ethanol increase, so do carloads of dried distillers grains, making for well-fed customers in barnyards across America. Greater use of freight rail offers a simple, inexpensive, and immediate way to reduce greenhouse gas emissions without harming the economy. On average, railroads are four times more fuel-efficient than trucks. If just 10 percent of long-haul freight now moving by truck moved by rail instead, annual greenhouse gas emissions would fall by more than 12 million tons, saving a cumulative total of nearly 200 million tons by 2020.

#### **Railroads key to transport ethanol**

AAR 12- American Association of Railroads, (“Railroads and Ethanol”, June 2012, http://www.aar.org/~/media/aar/Background-Papers/Railroad-Ethanol.ashx) ALT

Ethanol production is concentrated in the Midwest — where most of the corn that goes into ethanol production is grown — but many of the biggest markets for ethanol are on the East Coast, California, and Texas. Thus, large amounts of ethanol must be transported long distances from major production areas to major consumption areas. Railroads are the mode of choice for ethanol movements: today, railroads account for approximately 70 – 75 percent of ethanol transport. Ethanol is a small but rapidly growing commodity for railroads. In 2010 (the most recent year for which data are available), railroads terminated nearly 325,000 carloads of ethanol, up from just 40,000 carloads in 2000 and 43,000 in 2001.

#### **Ethanol is great for the economy – jobs, economic output, energy security and investment**

CFDC 11- Clean Fuels Development Coalition (“Economic Impacts of Ethanol Production”, A Publication of Ethanol Across America, 2011 edition, http://www.ethanolacrossamerica.net/pdfs/11CFDC\_IssueBrief.pdf) ALT

A study conducted by the Biotechnology Industry Organization (BIO) **explored the effects** of increasing advanced biofuels production **on the U.S. economy**. The study, “U.S. Economic Impact of Advanced Biofuels Production: Perspectives to 2030,” analyzes job creation, economic output, energy security and investment opportunity. **Among the study’s findings:** • The advanced biofuels industry could create nearly 30,000 new jobs and create $5.5 billion in economic growth over the next three years. • Increasing advanced biofuels production to levels mandated by the RFS will create more than 800,000 new jobs by 2022. • **Total economic impact, including indirect and induced economic effects, could total $148.7 billion by 2022.** • Advanced biofuels production could save the U.S. $350 billion by 2022 in reduced petroleum imports. • Direct economic output from advanced biofuels production could rise to $5.5 billion in 2012, $17.4 billion in 2016, and $37 billion by 2022.

#### **Ethanol benefits the economy, 5 ways – gas prices, GDP, farm income, real wages, and disposable income**

CFDC 11- Clean Fuels Development Coalition (“Economic Impacts of Ethanol Production”, A Publication of Ethanol Across America, 2011 edition, http://www.ethanolacrossamerica.net/pdfs/11CFDC\_IssueBrief.pdf) ALT

The economic impacts documented in this publication are linear: The more ethanol produced, the greater the returns. The Renewable Fuels Standard, the demise of MTBE and increasing world demand for liquid energy have combined to increase the investment in ethanol production. A 2010 study from the Economic Research Service of the USDA assessed the long-term impact of expanding biofuels production to 36 billion gallons per year by 2022. Studying the direct and indirect effects on the farm economy and related industries, USDA concluded: • U.S. imports of crude oil could fall by $61 to $68 billion and lower gas prices by 8 to 9 percent. • Increased biofuels production would add $6 billion to GDP. • The increase in corn demand could create up to a 5% increase in farm income. • The effect on finished food and feed prices would be negligible, creating a maximum increase of less than 0.5 percent. Increasing biofuels production will also raise real wages and disposable household income. The RFS2 will also increase net farm income by increasing demand for ethanol feedstocks like corn and sorghum.

#### **Ethanol development reduces GHG emissions from petroleum-based fuels**

DoT, 10- US Department of Transportation, (“Transportation’s Role in Reducing Greenhouse Gas Emissions: Volume 1”, report to Congress, April 2010, http://ntl.bts.gov/lib/32000/32700/32779/DOT\_Climate\_Change\_Report\_-\_April\_2010\_-\_Volume\_1\_and\_2.pdf) ALT

Petroleum-based fuels presently account for 97 percent of U.S. transportation energy use. Low-carbon fuel strategies include the development and introduction of alternative fuels that have lower carbon content and generate fewer transportation GHG emissions. The alternative fuels evaluated in this report include ethanol, biodiesel, natural gas, liquefied petroleum gas, synthetic fuels, hydrogen, and electricity. Alternative fuels strategies have primarily been investigated and quantified for the light-duty vehicle (LDV) sector, although some advances could potentially be applied to other sectors as well. 6 Vol. 2, Sec. 2.Transportation's Role in Reducing U.S. Greenhouse Gas Emissions: Volume 1 ES-4 • Renewable fuels such as ethanol and biodiesel offer potential for GHG emission reduction. The GHG emissions benefits of biofuels depend on a variety of factors, including the feedstock, production method, carbon intensity of energy used in production, prior land use, and the evaluation timeframe. Advanced biofuels from cellulosic sources will likely offer much steeper GHG reductions than first generation biofuels**,** though more research and development is needed, and commercialization has not yet occurred at high volumes. Existing vehicles can operate with low blends of ethanol and biodiesel, but vehicle modifications are needed for higher blends. Adequate distribution of infrastructure is **also** a key factor**.**

# Coal Good Add-On

#### Coal production is inevitable and growing but rail is key to transport it

**CBO, January 06** (“Freight Rail Transportation: Long-Term Issues”, Congressional Budget Office, January 2006, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/70xx/doc7021/01-17-rail.pdf) RW

Trends in Freight Rail Transportation Total freight traffic carried by all modes of transportation in the United States has been growing. Rail and intercity truck traffic, as measured in ton-miles, has risen steadily in recent years, while water transportation has declined (see Figure 1). Railroad freight traffic has trended upward over the history of the industry, generally suffering small dips only in periods of recession. Railroads experienced a sharp increase in traffic in the 1990s: traffic jumped more than 50 percent between 1990 and 2003, rising from about 1.0 trillion ton-miles to about 1.6 trillion ton-miles (see Figure 2). 27 Coal has long been the dominant commodity carried by rail in the United States. In 2004, it accounted for about 43 percent of the tons carried (see Figure 3) and about 20 percent of revenues of Class I railroads. 28 Coal traffic has trended upward over the past 10 years (see Figure 4 on page 8). The principal source**s** of railroad growth over the past decade have been coal and intermodal (“miscellaneous mixed”) shipments. 29 Coal traffic (as measured in tons) rose about 37 percent from 1994 to 2003; in terms of revenue, however, it increased just 12 percent. 30 Intermodal shipments, which tend to be relatively high in value and can command higher rates, grew about 33 percent in tonnage and 46 percent in revenues from 1994 to 2003. 31 Projections of Growth in Demand for Rail Transportation Rail traffic is projected to continue to increase as the economy grows. The Department of Energy’s Energy Information Administration (EIA) projects rail growth of 1.7 percent annually, rising from about 1.6 trillion tonmiles in 2004 to nearly 2.4 trillion ton-miles in 2030. 32 The Energy Department’s interest in rail transportation derives primarily from its interest in the production and consumption of coal.The EIA projects an increase in the number of tons of coal consumed in the United States of about 62 percent between 2004 and 2030. 33 About 92 percent of coal consumption in 2004 was for the production of electricity. 34 The EIA projects Western coal production to increase to nearly 1.1 billion tons in 2030 from 627 million tons in 2004. 35 Most of that coal will have to be transported over distances for which trucking costs would be prohibitive and where water transportation is unavailable, so railroads will probably be called upon to fill the need for coal transportation. The Federal Highway Administration (FHWA) has also developed a forecast of demand for freight transportation. That forecast, called the Freight Analysis Framework (FAF), focuses on tonnage, rather than ton-mileage, and is for the years 2010 and 2020. 36 In the FAF forecast, freight tonnage in the United States (including imports and exports) will rise by nearly 70 percent between 1998 and 2020, increasing from 15.3 billion tons in 1998 to 25.8 billion tons in 2020. 37 Rail tonnage is projected to rise by about 55 percent, from 2.3 billion tons to 3.6 billion tons. 38 Rail’s share of all freight traffic is projected to decline from 15.1 percent in 1998 to 13.9 percent in 2020. In the FAF forecast for 2020, coal continues to dominate rail traffic**,** accounting for about 37 percent of tonnage (see Figure 5 on page 9). Trailing coal are chemicals, accounting for about 9 percent of rail tonnage; food and kindred products, with about 8 percent; and, with about 7 percent each, farm products, nonmetallic minerals, and a category called “freight all kind,” which refers to general freight that might be carried in boxcars or intermodal containers or trailers. Showing the greatest growth in rail tonnage between 1998 and 2020 are clay/concrete/glass/stone and food and kindred products, which are projected to more than double in volume (see Table 1 on page 10). General freight (freight all kind) and lumber and wood are projected to nearly double. Coal and chemicals are projected to grow by 28.5 percent and 75.5 percent, respectively.

#### Coal industry dependent on rail**Kaplan 07-** Specialist in Energy and Environmental Policy, Congressional Research Service (Stan Mark, “Rail Transportation of Coal to Power Plants: Reliability Issues”, September 26, 2007, <http://www.cnie.org/nle/crs/abstract.cfm?NLEid=1916>)ALT

Freight rail transportation and electric power generation are mutually dependent network industries. Railroads accounted for over 70% of coal shipments to power plants in 2005, and due to economic and physical limitations on other modes (truck, barge, and conveyor) the heavy dependency of the power industry on rail transportation is likely to continue into the future. From the standpoint of the rail industry, coal transportation is an important business, accounting in recent years for about 20% of freight revenues for the major railroads.

#### Having coal as a utility option is key – any alternative drastically increases consumer energy costs

Zarraby 12 - chemical engineer for the Federal Energy Regulatory Commission, JD expected from GWU in 2012

Cyrus, “Note: Regulating Carbon Capture and Sequestration: A Federal Regulatory Regime to Promote the Construction of a National Carbon Dioxide Pipeline Network,” 80 Geo. Wash. L. Rev. 950, Lexis

In the United States, coal-fired power generation accounts for approximately forty-five percent of all electricity consumed. 32 Coal-fired generation is the most prevalent form of electricity because coal is abundant and less expensive than alternative sources of energy. 33 Specifically, the United States' coal reserve accounts for approximately twenty-five percent of the total coal in the world. 34 This coal reserve represents more potential energy than the amount of oil worldwide. 35 Because coal is readily available, the cost of producing electricity from coal is significantly less than other technologies. For example, the fuel costs associated with coal-fired generation are approximately seventy-five percent less than natural gas electricity. 36 Because of the low costs, the amount of electricity generated from coal rose by 5.4% between 2009 and 2010, even though the total increase in electricity generation was only 4.3%. 37 Coal-fired generation also serves the essential purpose of baseload generation. Baseload power is electricity that is generated at a constant rate to continuously supply a given demand. 38 In contrast with solar and wind power, whose electricity generation varies depending on factors outside the control of the power plant, coal-fired generation produces electricity at a constant rate. 39 As a result, regardless of how many solar panels or windmills are put in operation, the United States will continue to need baseload power from reliable energy sources to counter the varying supply of clean energy output. 40 Other fuel sources, such as natural gas and nuclear power, are also [\*957] used in baseload generation, but have specific drawbacks that make coal a stronger alternative. Fuel costs associated with natural gas-fired electricity are seventy-five percent higher than that of coal, 41 and the United States must import natural gas from foreign sources to meet the current demand. 42 Therefore, creating an energy portfolio that relies heavily on natural gas would require the United States to further rely on foreign sources of energy and increase the costs associated with electricity generation.

#### This collapses all major sectors of the economy

Rose and Wei 6 - \* Professor of Energy, Environmental and Regional Economics, \*\*Graduate Assistant in the Department of Geography at the Pennsylvania State University

Adam and Dan, “The Economic Impacts of Coal Utilization and Displacement in the Continental United States, 2015,” http://www.americaspower.org/sites/all/themes/americaspower/images/pdf/penn-state-study.pdf

We performed our analysis with the aid of an interindustry, or input-output, model. Specifically, we analyzed how coal-based electric generation affects production (output), household income, and employment in other sectors of each state and the continental U.S. as a whole under three alternative displacement scenarios. Our results indicate that the combination “multiplier” and “price-differential” effects are sizeable, amounting to $1.05 trillion ($2005) in total 48-state economic output for the “existence” of coal as a relatively inexpensive fuel for electricity generation. The results illustrate that government policies and private industry decisions affecting coal-based electric generation potentially can affect every major aspect of the American economy. The methodology underlying the study is summarized in Section II below, as well as in Appendix A, which also presents major assumptions and some basic computations underlying the analysis. The results for the five regions analyzed are summarized in Section III, with tables of basic data presented in Appendix B and simulation results presented in Appendix C. We simulated cases where coal-based electricity generation is displaced at levels of 66% and 33% by alternative energy supplies, including natural gas, nuclear, and a 10% mix of renewables, reflecting potential Renewable Portfolio Standards (RPS) that could be in place by 2015. The results indicate that for the nation, and for nearly every state individually, this displacement -- even factoring in positive offsetting multiplier impacts of replacement fuels and technologies -- would have a net negative economic impact. We project that national gross output would decline by $371 billion for the 66% case, and by $166 billion for the 33% case. II. Methodology A. Measuring Economic Interdependence With a broad base and high level of technological advancement, the U.S. economy exhibits a great deal of interdependence. Each business enterprise relies on many others for inputs into its production process and provides inputs to them in return. This means that the coal and coal-based electric utility industries’ contributions to the nation's economy extend beyond their own production to include demand arising from a succession of "upstream" inputs from their suppliers and "downstream" deliveries to their customers. The economic value of these many rounds of derived demands and commodity allocations is some multiple of the value of direct production itself. Hence, the coal and coal-based electric utility industries generate "multiplier" effects throughout the U.S. economy.

### Coal Extensions

#### Rails key to transport coal

National Atlas Project, 11- partnership between US Army Corps of Engineers, the Environmental Protection Agency, US Department of Agriculture, National Cancer Institute (“U.S. Freight Railroad Traffic”, the National Atlas, 1/26/11, http://www.nationalatlas.gov/articles/transportation/a\_freightrr.html) ALT

Coal is the most important single commodity carried by rail. In 2002, it accounted for 44 percent of tonnage and 21 percent of revenue for Class I railroads. The vast majority of coal in the United States is used to generate electricity at coal-fired power plants. Coal accounts for half of all U.S. electricity generation, far more than any other fuel source, and railroads handle approximately two-thirds of all U.S. coal shipments. Other major commodities carried by rail include chemicals, including massive amounts of industrial chemicals, plastic resins, and fertilizers; grain and other agricultural products; non- metallic minerals such as phosphate rock, sand, and crushed stone and gravel; food and food products; steel and other primary metal products; forest products, including lumber, paper, and pulp; motor vehicles and motor vehicle parts; and waste and scrap materials, including scrap iron and scrap paper.

#### Coal key to econ – GDP, jobs, household income

Trisko, 06 (Eugene, “Economic and Public Health Benefits of Coal-Based Energy”, National Center for Policy Analysis, September 26, 2006, http://www.ncpa.org/pub/ba573/) ALT

Researchers at Pennsylvania State University estimated the economic benefits of coal and the potential impact of replacing coal with more expensive energy sources such as natural gas and a 10 percent mix of renewables. They netted out the positive offsetting impacts of investments in replacement fuels and electric generating capacity. By 2015: The annual benefit of coal use at currently projected levels is estimated at more than $1 trillion in gross domestic product (GDP), $360 billion in additional household income and nearly 7 million jobs. In contrast, a 33 percent reduction in coal-fired electric power generation would reduce GDP by $166 billion, household income by $64 billion and employment by 1.2 million below what it otherwise would be. [See the figure.] A 66 percent reduction in coal-fired electric power generation would reduce GDP by $371 billion, household income by $142 billion and employment by 2.7 million. The negative impact of displacing coal would be felt nationally, regionally and in nearly every state, even after considering the positive impacts of replacement energy sources.

#### Coal is key to the economy

Rose and Wei 6 - \* Professor of Energy, Environmental and Regional Economics, \*\*Graduate Assistant in the Department of Geography at the Pennsylvania State University

Adam and Dan, “The Economic Impacts of Coal Utilization and Displacement in the Continental United States, 2015,” http://www.americaspower.org/sites/all/themes/americaspower/images/pdf/penn-state-study.pdf

Our analysis shows that, in 2015, U.S. coal production, transportation and consumption for electric power generation will contribute more than $1 trillion (2005 $) of gross output directly and indirectly to the economy of the lower-48 United States. Based on an average of two energy price scenarios summarized below, we calculate that $362 billion of household income and 6.8 million U.S. jobs will be attributable to the production, transportation and use of domestic coal to meet the nation’s electric generation needs. The United States relies heavily on coal to produce electric power. Domestic coal production has expanded from 560 million tons in 1950 to 1.13 billion tons in 2005, while coal consumption for electric generation has increased from 92 million tons to 1.04 billion tons in this period. Historically, coal has provided the lowest cost source of fossil energy in the U.S. Electricity is one of the most prominent commodities traded in the United States, second only to food in annual sales volume. We based our analysis on state-specific “IMPLAN” input-output tables -- a widely utilized source of data on the composition of state economic activity -- to estimate the basic direct and indirect “multiplier” effects of coal utilization for electric generation. These multiplier effects include the economic impacts of coal mining and of government spending of taxes paid by coal mining for electricity generation, by companies that transport coal, and by coal-fueled electricity generation companies. We calculated results at the state level and compiled regional summaries by dividing the nation into five geographic regions (see Figure S1, below). The study first presents estimates of the positive economic output, household income, and jobs attributable to projected levels of coal production and utilization in 2015. We used a 2015 base case because electric generation and other projections for this year were readily available from U.S. DOE and U.S. EPA. These estimates measure the “existence” value of coal as the key fuel input into U.S. electricity generation. The analysis includes estimates of the impact of higher electricity rates on individual state economies if utilities were required to utilize fuel sources and generating technologies more costly than coal-based electricity. Two Basic Scenarios Our first scenario includes backward linkage, or demand-side multiplier, effects for coalfueled electricity generation. Tax payments from coal production, utilization, and transportation subsequently result in government expenditures, which also generate multiplier effects. The analysis also includes the impacts of the favorable price differential attributable to coal-based electricity. This calculation measures the economic activity attributable to relatively cheaper coal in contrast to more expensive alternatives at upper-range (“high”) prices for alternative generation sources. Our second scenario is the same as the first in terms of backward linkages, but we calculated the price differential effects on the basis of lower-range estimates of the prices of alternative fuels and technologies. The study relied on U.S. DOE Energy Information Administration (DOE/EIA) and other projections of electric generation and delivered coal prices to estimate the impact on energy prices of replacing 100% of projected coal-fueled electricity generation. We estimated the impact of higher energy prices on state economies using a price elasticity estimate of 0.10, meaning that a 10% change in energy costs would induce a 1.0% change in state economic output. Regional results of the basic “Coal Existence” scenarios are summarized in Table S1 below. Assigning equal weight to each of the two energy price scenarios, we estimate that U.S. coal-fueled electric generation in 2015 will contribute: • $1.05 trillion (2005 $) in gross economic output; • $362 billion in annual household incomes, and • 6.8 million jobs. We also estimated the prospective net economic impacts of the “displacement” of coalfueled electricity generation at assumed levels of 66% and 33% from a projected 2015 base. These levels of displacement are consistent with some of the potential impacts of major environmental policy initiatives in climate change or other areas. In these cases, we again calculated backward linkage and price differential effects to determine potential negative impacts on each state’s economy. Additionally, we calculated potential positive economic benefits due to the operation of replacement electricity generation of various types. In all states, the net effect of displacing coal-based electricity was negative for the “high-price” scenarios, and in nearly all states, the net effect was negative for the “low-price” scenarios.

#### Coal has a key stimulus effect

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Adam and Dan, “The Economic Impacts of Coal Utilization and Displacement in the Continental United States, 2015,” http://www.americaspower.org/sites/all/themes/americaspower/images/pdf/penn-state-study.pdf

Coal-based electricity generation provides a significant stimulus to the U.S. economy by increasing output, income, and employment in all sectors through direct and indirect (multiplier) effects. It also increases the purchasing power of the consumer, and enhances the competitiveness of U.S. exports, by avoiding increased reliance on higher-priced fuels and electricity-generating technologies. Even when we take into account the positive economic effects of capital investments and operation of alternative energy generation sources, the replacement of coal-based electricity by relatively more expensive fuels or generating technologies would have a net negative economic impact on every region and on nearly every state. In general, these results reflect the large economic benefits associated with coal’s favorable price differential effect relative to alternative fuels.

#### Coal is key to the economy

Gates 10 (Steve, B.S. in Poli Sci from Saint Vincent College, M.A. in public commncaitons from American University, ACCCE’s national communcations director, February 03, “Clean coal can create new jobs, preserve existing ones”, <http://behindtheplug.americaspower.org/2010/02/clean-coal-can-create-new-jobs-preserve-existing-ones.html>)

As President Obama mentioned in his [State of the Union address](http://behindtheplug.americaspower.org/2010/01/state-of-the-union-and-clean-coal-technology.html%22%20%5Ct%20%22_blank) last week, sources of electricity production like wind, solar, natural gas and renewable and clean coal are inexorable parts of this country’s energy future as a way to create green jobs. For the United States to achieve energy independence and to lead the global marketplace in clean energy jobs, all of our energy resources must be part of the solution. By investing in energy innovations such as clean coal technology, we can preserve the good jobs we already have and expand the American workforce for decades to come. According to a study by [Pennsylvania State University](http://www.americaspower.org/news/study-details-impact-domestic-coal-american-economy), if coal production was to disappear completely,more than $1 trillion of gross output – including 6.8 million jobs – would be lost directly and indirectly from the economy of the contiguous United States in 2015. Compare that to the landscape with the deployment of clean coal technologies like carbon capture and sequestration (CCS) on a commercial scale. Constructing 100 power plants equipped with CCS could generate up to $1 trillion of economic output and create between 5 and 7 million man-years of employment and a quarter of a million permanent jobs, as reported by [BBC Research and Consulting](http://www.americaspower.org/news/economic-benefits-advanced-coal-electric-generation-0%22%20%5Ct%20%22_blank) in a 2009 study. As you can see, keeping coal in our nation’s energy mix allows for economic growth helps to protect the environment all while ensuring the many valuable American jobs that coal already has provided.

#### 150,000 deaths annually

Trisko, 06 (Eugene, “Economic and Public Health Benefits of Coal-Based Energy”, National Center for Policy Analysis, September 26, 2006, http://www.ncpa.org/pub/ba573/) ALT

The impact of eliminating coal wouldn't be limited to the economy; indirectly, it would also negatively affect health. Harvey Brenner of Johns Hopkins University conducted the first major research on the impacts of unemployment on public health for the Joint Economic Committee of Congress in 1979 and 1984. In his 1984 study, Brenner found that every 1 percent increase in unemployment resulted in a 2 percent increase in premature deaths. In 2005, Brenner updated his 1984 study and developed estimates of the impacts of potential reduced coal use on pubic health. Brenner's research connects the dots between the economic benefits of coal use and the public health consequences of reduced coal utilization. His finding: the loss of jobs causes increased premature mortality. Brenner's econometric model, drawing on more than 50 years of U.S. health and economic data, firmly links changes in U.S. mortality to changes in economic variables such as GDP per capita, the unemployment rate and the interaction between GDP and employment. Brenner's analysis shows that the upward trend in real per capita income is the most important single factor explaining decreased U.S. mortality rates since the 1960s. Conversely, any reduction in GDP per capita, say, as a result of an increase in unemployment, increases the mortality rate. Brenner applied his model to the findings of two studies that estimated the adverse economic impacts of reduced coal use - a 2001 Penn State study and an analysis of the impacts of the Kyoto Protocol by DRI, a noted economic forecasting and consulting organization. **Brenner adjusted the results** of these studies **to approximate the income and unemployment effects of a hypothetical** complete **elimination of coal.** Brenner reports "the estimated additional mortality in the year 2010, based on four different variations of the model, ranges from an additional 170,507 to 368,915 deaths for the displacement of 100% of coal-based generation. The author's moderately conservative estimate is based on an annual change model at 195,308 deaths." Applying his analysis to specific climate change policies affecting coal-fired generation, Brenner says: "Given an estimated potential displacement of 78% of U.S. coal generation based on EIA's study of proposed climate change initiatives, the indicated premature mortality from reduced income and increased unemployment would exceed 150,000 deaths annually, absent direct and effective mitigation programs."

### **AT: Coal Bad for Environment**

#### Coal power production continues to become substantially cleaner

RMCMI 12- Rocky Mountain Coal Mining Institute, (“Fast Facts About Coal”, January 2012, http://www.rmcmi.org/education)

Power plants being built today emit 90 percent less pollutants (SO2, NOx, Particulates, mercury) than the plants they replace from the 1970s, according the National Energy Technology Laboratory. Coal plants in the 21st century emit 40% less co2 than the average 20th century coal plant, according to the World Coal Institute. Regulated emissions from coal-based electricity generation have decreased overall by over 40 percent since the 1970s while coal use has tripled, according to government statistics. U.S. coal operations have reclaimed more than 2.3 million acres of mined land over the past 25 years. Since 1978, U.S. coal mines have paid more than $7 billion to reclaim mines that were abandoned prior to laws requiring reclamation. Approximately five million acres of land have been mined in the U.S. to produce coal; and most of the land not under active mining has been or is being reclaimed to the standards set by law.

#### Regulations check environmental impacts of coal

**Clary 09 -** Chief Sustainability Officer at Industry Weekly (David Clary, “Clean Coal is Good for Business”, Industry Weekly, February 26, 2009, http://www.industryweek.com/articles/viewpoint\_--\_clean\_coal\_is\_good\_for\_business\_18522.aspx

A recent decision by a federal appeals court reinstated **the Environmental Protection Agency's Clean Air Interstate Rule (CAIR),** which **will reduce some kinds of pollution from coal-fired power plants. The rule requires coal-fired plants in 28 states in the Midwest, the East and the District of Columbia to reduce millions of tons of smog and particulates**. **The second phase in 2010 calls for a reduction in sulfur dioxide, and the third phase in 2015 requires further reductions in multiple air pollutants.** Industry, as expected, has complained that this regulation will cost too much, that consumers will be forced to pay exorbitant utility rates, that the economy can't afford the luxury of emissions reductions. Baloney. These regulations will directly benefit the residents of these states, along with the insurance companies who will face fewer health claims caused by pollution-related illnesses and the employers who will benefit from lower absenteeism and heath care costs. The regulations will also benefit the coal companies -- just like safety belts and later, air bags, helped the auto industry. It is clear that the residents and voters of America are concerned about their health and the health of the environment. If the utility industry does not adapt to this reality and establish a leadership position on environmental issues, it risks the imposition of policies that will permanently disadvantage coal versus other energy sources.

#### **Benefits of coal o/w costs to environment**

Trisko, 06 (Eugene, “Economic and Public Health Benefits of Coal-Based Energy”, National Center for Policy Analysis, September 26, 2006, http://www.ncpa.org/pub/ba573/) ALT

Shifting from coal-fired electric power generation to other forms of energy would have a small effect on CO2 emissions and an even smaller impact on climate change, but it would impose costs on the economy and thereby the health of Americans. The benefits of coal, **and the cost of eliminating it,** should be weighed against benefits from the incremental reduction in air pollution and CO2 emissions. Adding up the benefits and subtracting the costs, the ledger for coal remains in the black.

# Solvency

#### **$148 billion investment covers line expansion, bridge improvements, support facilities, and intermodal transport**

Cambridge Research Center, 07 (“National Rail Freight Infrastructure Capacity and Investment Study”, prepared for American Association of Railroads, September 2007, http://www.aar.org/~/media/aar/Files/natl\_freight\_capacity\_study.ashx) ALT

The cost of improvements needed to accommodate rail freight demand in 2035 is estimated at $148 billion (in 2007 dollars). The Class I freight railroads’ share of this cost is projected to be $135 billion; the short line and regional freight railroads’ share is projected to be $13 billion. The cost estimates cover: • Line expansion: – Upgrades to mainline tracks and signal control systems; – Improvements to significant rail bridges and tunnels; – Upgrades to Class I railroad secondary mainlines and branch lines to accommodate 286,000-pound freight cars; and – Upgrades to short line and regional railroad tracks and bridges to accommodate 286,000-pound freight cars. • Facility expansion: – Expansion of carload terminals, intermodal yards, and international gateway facilities owned by railroads; and – Expansion of Class I railroad service and support facilities such as fueling stations and maintenance facilities.

#### A strain on rail is inevitable by 2035 – can only be addressed through strategic investment

**Corridors of Commerce, 2010** (“Benefits of the Rail: Economic Development”, 2010, http://www.tradecorridors.com/benefits-of-rail/economic-development/) ML

**Freight rail is critical to commerce and** **the health of local, national, and global markets. No other form of**

**ground transportation can move the sheer volume of goods and products to the global marketplace like freight rail does. Rail fuels economic growth safely, efficiently, and in a more environmentally responsible way. As the economy grows, so will demand for freight transportation. The U.S. Department of Transportation forecasts demand will rise 88% by 2035 from 2002** levels. **This will inevitably create a strain on the nation’s rail corridors which can only be addressed through strategic investments.** Improvements to the BNSF Corridors of Commerce will relieve chokepoints on the national rail system and allow it to respond to the nation’s call to increase economic output.

#### Ignore their squo solves arguments - demand for rail service is reaching a point that requires government investment

**CBO, 2005** (Congressional Budget Office, “Freight Rail Transportation: A Review of the 2004 Experience”, May 2005, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/63xx/doc6350/05-11-freightrail.pdf)
**The recent surge in demand for freight rail transportation appears to have been accommodated without significant effects on the overall economy and without substantial government intervention.** The expression of **concern** by the Surface Transportation Board **about the potential for a breakdown in service may have prompted the railroads to enhance their efforts to meet demand**, but it would have been in the railroads’ own interest to do so anyway. If a temporary increase in demand stretches rail capacity to its limits, that does not imply a need for government intervention. In most industries, shortages of a product or service simply indicate a need for price increases in order to clear the market. If higher demand is the result of seasonal factors, producers may find it economically unproductive to expand their capacity to meet peak demand because then there would be excess capacity lying idle the rest of the time. **The demand for rail service has been trending upward, however, even when overall economic activity has dipped. That development suggests a need to consider how rising demand for freight transportation will be met in the future. It raises issues about whether current public policies affecting the rail industry**—and, indeed, policies affecting the other freight transportation industries as well—**are likely to lead to productive investments in transportation infrastructure** and an economically efficient allocation of resources among transportation modes.

#### Companies want to use rail over trucks

**Longman, 2009** – Senior research fellow with New America Foundation, Schwartz senior fellow at Washington Monthly, senior writer and deputy assistant managing editor at U.S. News & World Report, graduate of Oberlin College, fellow at Columbia University (Phillip, “Back on Tracks”, The Washington Monthly, January/February 2009, http://www.newamerica.net/publications/articles/2009/back\_tracks\_9914)

**The half-conscious decision by Washington, Wall Street, and the last generation of rail management to abandon much of the rail system thus prevents railroads from getting more trucks off the road. For example, UPS desperately wants to use** fast **trains** like the ones Erie Lackawanna once had **to reduce the cost of moving parcels coast to coast** in less than four days, **a feat currently requiring a tag team of truck drivers at enormous cost in fuel and labor**. For a brief time in 2004, UPS did persuade two railroads to run a train fast enough to handle this business. But due to insufficient track to allows lower trains to get out of its way, the UPS bullet train caused massive congestion, freezing up the Union Pacific system for months until the railroad at last canceled the service. **Big trucking companies like J. B. Hunt, meanwhile, have become the railroad's biggest intermodal customers, sending as many of their containers as they can by rail.**

#### AT: Trucks solve – trucking industry can’t compete – drivers unwilling to work and high costs

**CBO, 2005** (Congressional Budget Office, “Freight Rail Transportation: A Review of the 2004 Experience”, May 2005, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/63xx/doc6350/05-11-freightrail.pdf)

**The rising costs facing the trucking industry, the railroads’ major competitor, have contributed to an increase in demand for rail. Trucking companies have apparently found it difficult to attract enough drivers willing to endure the lengthy separations from home** and family that are characteristic of long-distance trucking. Scott Arves, the transportation-sector president of Schneider National, which employs 15,000 drivers, has suggested that **the “average annual pay for a truckload driver may have to rise from about $40,000 to $60,000.”** In 2004, Schneider offered a $5,000 signing bonus to experienced drivers. 29 Moreover, **escalating fuel prices have affected truckers** as well as railroads. Both **trucking companies** and railroads typically **impose surcharges that reflect increases in fuel prices, but those surcharges have not kept pace with rising fuel costs.**

# **Potential Terrorism Advantage**

 *FYI - Running this advantage would definitely require more work and probably a different/more specific plan-text depending on what the solvency advocate you find says.*

#### **Funding for rail security severely low now due to prioritization of airline security following 9/11**

Capra, 2006 Chief of the Program Management Office, Air Force Center for Environmental Excellence (Gregory, “Protecting Critical Rail Infrastructure”, 12/2006, http://cpc.au.af.mil/PDF/monograph/criticalrailinfrastructure.pdf) VS

Since the 9/11 terrorist attacks on the World Trade Center and the Pentagon, experts have been specifically warning of the vulnerability of critical rail systems to terrorist attack. The Century Foundation Task Force Report lists the security of rail systems, chemical plants and ports receiving shipping containers among the highest priorities to protect. The Rail Security Act of 2004 Report stated: “A terrorist attack on the nation’s rail system could cripple freight and commuter transportation. . . . Even the brief service disruptions following the 2001 terrorist attacks caused emergencies for several cities awaiting rail deliveries of chlorine used to purify their water…” The 9/11 Commission Report warned that “While commercial aviation remains a possible target, terrorists may turn their attention to other modes. Opportunities to do harm are as great, or greater, in maritime or surface transportation. . . . Surface transportation systems such as railroads and mass transit remain hard to protect because they are so accessible and extensive.” Clearly, there are risks associated with rail systems but the question that remains unanswered is, what will the government do to protect them? Part of the concern is the U.S. Government’s lack of emphasis on and funding for the security of rail systems. Essentially, protection of U.S. rail systems have been given a much lower priority than protection of the U.S. airline industry as a result of the impact of the terrorists’ acts on the commercial aviation industry. This is reflected in the funding provided by the U.S. Government for security through the Transportation Security Agency. During the Secretary of Homeland Security’s testimony before the Homeland Security Committee, Representative Bennie Thompson (D-MS) pointed out the fact that the Transportation Security Agency focused too much on aviation and had allocated a mere 7 percent of its budget to inspect and patrol rail lines. Representative Thompson felt this was unacceptable and that, if necessary, the Transportation Security Agency should be reorganized to make rail security a higher priority. In addition, the GAO recently reported that funding for aviation security for fiscal years 2005 and 2006 was 87 percent of the Transportation Security Agency’s budget. The president of the American Public Transportation Association testified that since 9/11 the industry identified a $6 billion requirement for security enhancements of all systems, they invested $2 billion.

#### Terrorists will target freight – hazardous materials and densely populated urban routes

**Riley, 2004** – Director of RAND Public Safety & Justice/Vice President, RAND National Security Research Division, Ph. D in public policy analysis/M.S. in foreign service/B.A. in economics (Jack, “Terrorism and Rail Security”, March 23, RAND Corporation, http://www.rand.org/pubs/testimonies/2005/RAND\_CT224.pdf)
**Freight rail** does not offer terrorists high densities of passenger targets, but it does **provide terrorists with** some **opportunities that passenger rail does not afford.** In particular, **freight rail is used to transport hazardous materials and dangerous cargoes. An estimated 40 percent of inter-city freight, including half of the nation’s hazardous materials** (based on tonmiles), **moves by rail**. 4 In some circumstances, **these cargoes are transported through densely populated urban areas**. Two accidents involving freight rail help illustrate some of the potential issues associated with hazardous cargoes: • A train carrying liquid fertilizer derailed in a small North Dakota town in January 2002. The incident killed one and hospitalized 15. The accident punctured 18 cars and resulted in a toxic cloud. Residents within a 3-mile radius of the incident were evacuated. 5 • In July 2001 a railcar caught fire in a tunnel under downtown Baltimore. The fire, which took five days to extinguish, involved chemicals and other cargo on the train. Rail movements throughout the Northeast Corridor, fiber optic communications, light rail passenger trains in the downtown area, and Amtrak passenger trains were all disrupted during the incident.

#### **Terrorist attacks on freight rails likely - cause catastrophic loss of life, economic and infrastructural meltdown**

GAO, 2009 (Government Accountability Office, “Freight Rail Security” 04/2009, http://www.gao.gov/assets/290/288753.pdf) VS

While there are currently no specific threats to U.S. freight rail, experts consider the U.S. rail system to be an attractive terrorist target because of its public accessibility, long stretches of open and unattended track, and the difficulty of securing a wide array of rail assets that are difficult to patrol. Further, an attack on the U.S. freight rail system could lead to catastrophic loss of life because the system often traverses densely populated urban areas carrying highly hazardous materials. According to the Department of Transportation (DOT), freight rail is the primary mode by which hazardous materials are transported throughout the nation, with railroads typically carrying from 1.7 million to 1.8 million carloads of hazardous materials annually. The category of hazardous materials considered to be the most dangerous to the public are Toxic Inhalation Hazards (TIH), which can be fatal if inhaled. TIH materials include chlorine (used in water treatment) and anhydrous ammonia (used in agriculture). In addition, shipments of TIH, especially chlorine, frequently move through densely populated areas to reach, for example, water treatment facilities that use these products. If released from a railcar in large quantities under certain atmospheric conditions, TIH materials could result in fatalities to the surrounding population. For example, an accidental train derailment in Graniteville, South Carolina, in 2005 unintentionally caused the release of several tons of TIH materials into the atmosphere, resulting in nine deaths, the treatment of 75 people for chlorine exposure, and the evacuation of over 5,400 people within a 1-mile radius for several days. As a result, concern exists that similar scenarios deliberately executed on a larger scale by terrorist groups could pose serious risks of fatalities and injuries. In addition to the potential for physical harm to the public caused by a hazardous materials release, concern also exists regarding the critical role that certain rail infrastructure plays in the efficient operation of the rail network, including the interdependency of passenger and freight rail networks as a result of shared infrastructure. As such, the degradation or destruction of critical rail infrastructure could potentially have negative economic consequences affecting both passenger and freight rail modes.

#### **Terrorist attack on freight rails would be the equivalent of a WMD attack**

Kaplan 07 Eben – staff writer for council on foreign relations (“Rail Security and the Terrorist Threat”, Council on Foreign Relations, http://www.cfr.org/united-states/rail-security-terrorist-threat/p12800) AW

Many of the tracks that carry passenger trains run parallel to those carrying freight shipments throughout the United States, meaning rail cargoes often travel along the same heavily populated corridors. Much of the freight presents little danger to people living near the tracks, but some does—particularly certain industrial chemicals. The deadliest of these chemicals are almost identical to those used as weapons on the battlefields of World War I, and in 2005 former White House Deputy Homeland Security Adviser Richard Falkenrath told the Senate these chemicals pose “the single greatest danger of a potential terrorist attack in our country today.” Hazardous chemicals travel on railcars in ninety-ton pressurized tanks. What little security exists along their route tends to be lax, and at times tanks sit unmonitored in rail yards for days at a time. Should one of these tanks rupture—either from a terrorist attack or an accident—the results could be catastrophic. Fred Millar, a rail security lobbyist and former member of the Washington, D.C. local Emergency Planning Committee, likens the shipment of chemicals through America’s biggest cities to “pre-positioning weapons of mass destruction.” Dr. Jay Boris of the Naval Research Laboratory in Washington, D.C., told the City Council that the worst-case scenario for that city could result in up to a hundred thousand fatalities. A video from his laboratory simulates the spread of a toxic gas cloud over three major U.S. cities. A more conservative 2004 Homeland Security Council report (PDF) estimated that a ruptured chlorine gas tank in a densely populated area could kill as many as 17,500 people and injure an additional 10,000. In addition to the dead and wounded, tens of thousands would have to evacuate, causing widespread panic. Nancy L. Wilson, the Association of American Railroads’ vice president for security, calls Boris’ projection “pure fearmongering” and suggests the Homeland Security Council model would require perfect conditions. Wilson, who speaks for the rail industry, says a more plausible scenario might result in hundreds dead, not thousands.

#### **Freight rail attack = CW attack**

Capra, 2006 Chief of the Program Management Office, Air Force Center for Environmental Excellence (Gregory, “Protecting Critical Rail Infrastructure”, 12/2006, http://cpc.au.af.mil/PDF/monograph/criticalrailinfrastructure.pdf) VS

Terrorists could attack a freight train hazardous material shipment to release poisonous gas in a populated area to achieve an effect comparable to the use of a chemical weapon. There are numerous ways for a terrorist to attack or derail a freight train carrying hazardous materials to include any of the following methods: an improvised explosion device (placed on-board or on tracks); shoulder-fired missiles; a motorcycle or other vehicle pulling along side to place backpacks containing explosive materials on board; a truck bomb at a road crossing or bridge; parking a vehicle at the intersection of the rail tracks; or running the train at excessive speed during a hijacking. It has been suggested that a 0.50 caliber assault rifle could penetrate railcar HAZMAT storage tanks releasing poisonous gases. Even with the tightest surveillance and security, it would be difficult to deter or defend against terrorists in these types of attacks.

### AT: Can’t Protect Against Attack

**Freight rail operates on a closed system making it easier to secure**
Capra, 2006 Chief of the Program Management Office, Air Force Center for Environmental Excellence (Gregory, “Protecting Critical Rail Infrastructure”, 12/2006, http://cpc.au.af.mil/PDF/monograph/criticalrailinfrastructure.pdf)

**All rail systems share many of the same vulnerabilities**: they are open to hijackings, and there are myriad unsecured rail cars, rail corridors, tunnels, bridges, switch gear, maintenance and storage yards, buildings, parking areas, and power, communication and surveillance systems. **Freight systems can operate in a closed network where the railroads have control over the cargo as opposed to passenger systems that rely on an open system. A closed system, similar to the screening process of the airport security, is easier to protect. Once freight is screened by rail security, it remains protected by the railroads until it reaches its destination**. Decisions on how much protection to provide to freight rail should be a reflection of the type and quantity of hazardous materials (HAZMAT) involved. **HAZMAT loads should get priority protection. Passenger trains are harder to protect because they require an open system** to allow a large number of passengers’ quick entry and exit from trains and stations.

# Answers

# AT: States CP

#### Fed key – safety, interstate commerce, and global competitiveness – plan is also a prerequisite to state funding

Shank 12- CEO and president of Eno Center for Transportation, (Joshua, “The Federal Role in Transportation: Four Ideas for Greater Federal Involvement”, Eno Brief Newsletter, May 2012, http://www.enotrans.org/eno-brief/the-federal-role-in-transportation-four-ideas-for-greater-federal-involvement) ALT

**The role of the federal government** in daily life **has been the subject of** an ongoing national **debate** in this country since our founding. The 2012 Presidential Campaign will not resolve it, nor most likely will any single event, but it is an essential debate to have in all subject areas, **and transportation is no exception**. In fact, the role of the federal government in transportation is particularly challenging because so much of transportation is inherently local and yet the federal government plays a substantial and varying role, ranging from a primarily safety and regulatory role in freight rail and ports to strong funding role in highways and transit. Americans rarely look to the federal government to solve their transportation problems, and yet without the federal contribution, states and localities would face serious challenges in meeting transportation needs. There is a tendency to think in generalities when we talk about the federal role in transportation. It is easy to say, for example, that the federal role should include Interstate Commerce. But what exactly qualifies as such? Similarly, it is easy to say that the federal role should not include investments with purely localized benefits. But **most investments have at least some national benefit** – how do we measure it and how much is enough? In an attempt to move beyond generalities, below are **four** ideas for greater federal involvement. 1. National Freight Plan and Discretionary Grant Program. It is inconceivable, and yet largely true, that the U.S. has never really put together a national, multi-modal plan for freight transportation. Not only is there is no national freight plan; there is no federal money available specifically for freight despite its obvious relationship to interstate commerce and our global competitiveness. Developing a national freight plan would be a challenging but worthwhile process of establishing where the investment needs are national in scope. This means moving beyond highways to consider rail and inland waterways, and access to seaports and airports. In light of the coming Panama Canal expansion, and its potential implications for changing trade patterns, there could be substantial new investments that needs to be made and others that should be avoided. **Federal guidance and leadership could be crucial**. Fortunately, the Senate authorization bill (S. 1813) moves in this direction by designating a primary freight network within one year. This represents a substantial step forward in recognizing the federal role in freight transportation. Unfortunately, S. 1813 also distributes money for the freight network entirely by formula, and it is almost entirely highway focused. Freight investments are by nature lumpy and distributing money for them by formula does little to ensure cost-effectiveness from a national perspective. The most cost-effective freight investments are often in relieving bottlenecks, which may require substantial capital investment in multiple modes but concentrated in one place. There is little incentive for states to invest precious formula dollars in these capital-intensive projects, but those same states might compete for discretionary dollars [from the federal government] for those projects.

#### **Federal grant programs are essential – funds can be targeted to specific projects**

Hunt 05 Cambridge Systematics, Inc.(David, RETURN ON INVESTMENT ON FREIGHT RAIL CAPACITY IMPROVEMENT Requested by: American Association of State Highway and Transportation Officials (AASHTO), April, http://www.transportation.org/sites/planning/docs/nchrp43.pdf) AW

A first approximation from the FRBL report suggests that the freight rail system needs an additional investment of $2.6 to $4.0 billion annually and that this investment is likely to be shared among the railroads, state and local governments, and the Federal government. The AASHTO report also suggests, as we look forward, that the states and local agencies in cooperation with the private sector can look at the following finance mechanisms for investing in freight rail improvements: 1. Grants from surface transportation programs. Grants give states and the Federal government the best control over the use of funds. Funds can be targeted to specific projects that solve freight and passenger rail needs. At the Federal level, the longstanding FHWA Section 130 Rail-Highway Grade Crossing Program provides dedicated funding to improve safety at rail grade crossings. CMAQ, created in ISTEA, has benefited passenger and freight rail intermodal projects where there is an air quality benefit. There are also discretionary grant programs such as the Corridors and Borders Programs in TEA-21 and a proposal for a Program for Projects of National Significance is included in reauthorization bills..

#### **Only fed programs solve - state budgets aren’t flexible and won’t cover rail**

GAO 07- Government Accountability Office, (“DOT Could Take Further Actions to Address Intermodal Barriers”, Report to the Chairman, Committee on Transportation and Infrastructure, House of Representatives, June 2007, http://www.gao.gov/new.items/d07718.pdf) ALT

Officials from one state DOT with whom we met said they wanted to reduce highway congestion by transferring freight that travels on trucks to trains by improving the capacity and efficiency on the freight rail line. Officials said they were unable to use highway funds for this purpose, even though it may have been the most effective way to reduce congestion on the highway. Several surface transportation and aviation funding and credit programs have broad criteria and can be used more easily to fund intermodal projects, but funding available through these programs can be limited when compared with the total cost of intermodal projects, and projects must meet certain criteria to qualify for funding. An example of a program that can be used to fund intermodal projects is the credit assistance program authorized by the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA). TIFIA **provides federal credit assistance for surface transportation projects, including** passenger bus and **rail** facilities.

### **States Can’t Solve Terrorism Adv**

#### **States can’t solve – no authority to relocate rail lines**

Capra, 2006 Chief of the Program Management Office,

Air Force Center for Environmental Excellence (Gregory, “Protecting Critical Rail Infrastructure”, 12/2006, http://cpc.au.af.mil/PDF/monograph/criticalrailinfrastructure.pdf) VS

Second, the U.S. Government needs to address the transportation of hazardous materials through densely populated areas. State and local governments do not have the authority to restrict passage since this involves interstate transportation of goods. Therefore, the U.S. Government needs to provide funding or incentives for the freight railroads to relocate rail lines carrying hazardous materials away from densely populated areas with critical chokec points like the Howard Street Tunnel in Baltimore. In addition, shipment of hazardous materials either should never be routed through major population centers or should at least be restricted in densely populated areas or through critical nodes during high threat levels. As a minimum, the U.S. Government needs to require freight railroads to notify local governments when transporting hazardous materials to allow these communities the opportunity to provide additional security.

#### Federal government key - coordination

**Riley, 2004** – Director of RAND Public Safety & Justice/Vice President, RAND National Security Research Division, Ph. D in public policy analysis/M.S. in foreign service/B.A. in economics (Jack, “Terrorism and Rail Security”, March 23, RAND Corporation, http://www.rand.org/pubs/testimonies/2005/RAND\_CT224.pdf)//MJ

**There is a need for a coordinated federal policy on rail security**, encompassing freight, passenger and commuter rails. **Compared to other transportation sectors, decision-making appears to be quite decentralized** between a number of federal, state, local, and private concerns. **A coordinated approach for counterterrorism measures in the rail transportation system should** undertake three tasks. First, it should **define the federal role** in preventing or mitigating such attacks. Second, it should **prioritize investments** needed for preventing attacks against rail transportation systems with those needed to prevent attacks against other transportation systems. Third, it should define the roles and responsibilities of federal, state, and local agencies, transportation companies, and passengers and freight shippers in preventing terrorist attacks against rail systems and in responding to their consequences.

#### **Fed key – TSA is responsible for freight rail security**

GAO, 2009 (Government Accountability Office, “Freight Rail Security” 04/2009, http://www.gao.gov/assets/290/288753.pdf) VS

An attack on the U.S. freight rail system could be catastrophic because rail cars carrying highly toxic materials often traverse densely populated urban areas. The Department of Homeland Security’s (DHS) Transportation Security Administration (TSA) is the federal entity primarily responsible for securing freight rail. GAO was asked to assess the status of efforts to secure this system. This report discusses (1) stakeholder efforts to assess risks to the freight rail system and TSA’s development of a risk-based security strategy; (2) actions stakeholders have taken to secure the system since 2001, TSA’s efforts to monitor and assess their effectiveness, and any challenges to implementing future actions; and (3) the extent to which stakeholders have coordinated efforts. GAO reviewed documents, including TSA’s freight rail strategic plan; conducted site visits to seven U.S. cities with significant rail operations involving hazardous materials; and interviewed federal and industry officials. What GAO Recommends Among other things, GAO recommends that TSA reflect all security threats in strategy, strengthen its performance measures, better assess and track actions being taken, and more closely work with some federal stakeholders. DHS generally concurs with our recommendations and has initiated action on some; however, these actions will not fully address all of the recommendations.

# AT: HTF CP/Funding Mechanism

#### Making rail projects eligible for highway trust fund money doesn’t solve– dilutes political support for the projects and no guarantee the funds will be used on railFrittelli, 2003 (John F., Transportation Analyst – Resources, Science, and Industry Division, Congressional Research Service, “Intermodel Rail Freight: A Role for Federal Funding?”, March 31, http://www.policyarchive.org/handle/10207/bitstreams/1673.pdf)

**A drawback of using the HTF for non-highway projects is the problem of “eligibility creep.” Expanding eligibility may dilute the political support for the fund if the interests benefitting from it are too widely dispersed. Using the gas tax to support non-road projects could also reduce the “users-pay” principle - the principle that those who benefit must pay for the cost.** The existing gas tax is an imperfect pricing system, however, because all users do not necessarily pay their full costs. For example, the fuel tax does not capture the costs of congestion delays and air pollution and cross-subsidizes certain classes of system users. **Expanding the eligibility of existing programs for rail does not guarantee that rail projects will be funded. State DOTs and local MPOs may favor highway and passenger related projects over freight rail concerns. Freight rail projects face stiff competition from highway and transit needs for limited resources in the HTF. Local governments may perceive the benefits of freight rail projects as flowing outside their geographic boundaries.** Another downside of increasing availability of HTF dollars for rail projects is that it may make railroads dependent on public aid to get certain types of projects underway. Private carriers may then demand government aid on a routine basis for private infrastructure improvements.

# AT: Privatization CP

#### *This is essentially status quo so cards from inherency/status quo fails will apply.*

#### **Federal investment in freight rail is necessary to maintain continued development of the industry**

GAO 06 (Government Accountability Office, “FREIGHT RAILROADS”, Report to Congressional Requesters, October, http://www.gao.gov/new.items/d0794.pdf) AW

Recent forecasts predict that the demand for freight and freight rail transport will grow significantly in the future. While **forecasts** have limitations as guides to investing in new transportation infrastructure, they **can present a plausible picture of future freight demand and capacity.** Whether private rail companies will be able and willing to invest in new infrastructure capacity to meet projected future demand is uncertain. New rail capacity not only benefits each private rail company network, but it also has the potential to benefit the public by improving traffic flow, air quality, and safety at the national, state, and local levels. As a result, the public sector has increasingly been investing in freight rail projects. Federal involvement in the freight system should be consistent with the competitive marketplace and ensure that funding decisions reflect widespread public priorities.

#### Freight rail is already privatized – industry can’t respond to rising demand CBO, 2006 (Congressional Budget Office, “Freight Rail Transportation: Long- Term Issues”, January 2006, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/70xx/doc7021/01-17-rail.pdf)The freight railroad industry plays an important role in the nation’s economy as a mainstay of transportation for many basic industries and, increasingly, for exports and imports that travel by rail to and from the nation’s ports. After a long period of excess rail capacity, the pendulum has begun to swing toward tight capacity—at least at certain times and places. 1 Some transportation experts have expressed concern that the railroads are not investing enough to meet rising demand for their services. If they cannot keep pace, the result could be higher costs not only for shippers and consumers but also for taxpayers, because demand that the railroads cannot satisfy is most likely to be handled by trucks and thus require more spending on the construction and maintenance of highways. The concern expressed about the availability of supply implies a view that the railroad industry is somehow different from most other industries. Most companies in a market economy respond to increases in demand by raising prices, which increases revenues and profits that can then be used to finance expansion. The prospect of profits not only induces existing firms to expand but also attracts newcomers to the industry. Why might the railroad industry not respond to rising demand as other industries do? Economic factors specific to the railroad industry may reduce its ability and willingness to invest in new capacity. Building new track is costly, and because track is fixed in a specific location, investing in it subjects railroads to the risk that demand will shift to other locations and that the investment will not yield an adequate return. The other major domestic freight transportation industries, trucking and water carriers, do not face that kind of risk; instead, the governments that build and maintain highways and waterways—and the taxpayers who provide their funding— bear that risk.

#### **Risks mean private sector is unwilling and unable to invest**

GAO 06 (Government Accountability Office, “FREIGHT RAILROADS”, Report to Congressional Requesters, October, http://www.gao.gov/new.items/d0794.pdf) AW

If demand does develop as forecasted, it is uncertain how able and willing railroads will be to invest in new capacity. Railroads do not prepare long-term capacity plans because of concern about the potential for significant economic changes—for example, officials at one Class I railroad stated that they prepare capacity improvements plans and demand projections for 3 to 5 years into the future, with frequent revisions. In addition, the railroads we interviewed were generally unwilling to discuss their future investment plans with us in any detail because this is business proprietary information. It is therefore difficult to comment on how railroads are likely to choose among their competing investment priorities for the future compared with various demand scenarios. Railroads’ ability and willingness to invest in new capacity to meet demand reflects a number of key considerations. For privately owned rail companies, a key business consideration is maximizing returns for shareholders. To do so, realizing the greatest return on investment from each investment decision is essential and is reinforced by pressure from shareholders. Rail investment involves private companies taking a substantial risk which becomes a fixed cost on their balance sheets, one on which they are accountable to stockholders and for which they must make capital charges year in and year out for the life of the investment. A railroad contemplating such an investment must be confident that the market demand for that infrastructure will hold up for 30 to 50 years. This is in sharp contrast to other modes such as highway infrastructure, which is paid for largely by public funds. Maximizing a rail company’s competitive position in key markets is important in deciding on investments in the company network’s size and facilities. For example, the growth of intermodal transport is a major development for freight rail because it stands to be the largest revenue generator for the Class I railroads. As a result, there is intense competition for this business, although intermodal business also means that freight rail both competes and cooperates with other freight modes. However, intermodal growth depends on the railroads’ ability to invest in the new capacity needed to meet this demand.

#### **Federal grant programs are essential – funds can be targeted to specific projects**

Hunt 05 Cambridge Systematics, Inc.(David, RETURN ON INVESTMENT ON FREIGHT RAIL CAPACITY IMPROVEMENT Requested by: American Association of State Highway and Transportation Officials (AASHTO), April, http://www.transportation.org/sites/planning/docs/nchrp43.pdf) AW

A first approximation from the FRBL report suggests that the freight rail system needs an additional investment of $2.6 to $4.0 billion annually and that this investment is likely to be shared among the railroads, state and local governments, and the Federal government. The AASHTO report also suggests, as we look forward, that the states and local agencies in cooperation with the private sector can look at the following finance mechanisms for investing in freight rail improvements: 1. Grants from surface transportation programs. Grants give states and the Federal government the best control over the use of funds. Funds can be targeted to specific projects that solve freight and passenger rail needs. At the Federal level, the longstanding FHWA Section 130 Rail-Highway Grade Crossing Program provides dedicated funding to improve safety at rail grade crossings. CMAQ, created in ISTEA, has benefited passenger and freight rail intermodal projects where there is an air quality benefit. There are also discretionary grant programs such as the Corridors and Borders Programs in TEA-21 and a proposal for a Program for Projects of National Significance is included in reauthorization bills..

#### Privatization is squo – it’s failing miserably, multiple reasons – federal investment key

**Longman, 2009** – Senior research fellow with New America Foundation, Schwartz senior fellow at Washington Monthly, senior writer and deputy assistant managing editor at U.S. News & World Report, graduate of Oberlin College, fellow at Columbia University (Phillip, “Back on Tracks”, The Washington Monthly, January/February 2009, http://www.newamerica.net/publications/articles/2009/back\_tracks\_9914)

Why don't the railroads just build the new tracks, tunnels,switch yards, and other infrastructure they need? America's major railroad companies are publicly traded companies answerable to often mindless, or predatory,financial Goliaths. While Wall Street was pouring the world's savings into underwriting credit cards and sub-prime mortgages on overvalued tract houses, America's railroads were pleading for the financing they needed to increase their capacity. And for the most part, the answer that came back from Wall Street was no, or worse. CSX, one of the nation's largest railroads, spent much of last year trying to fight off two hedge funds intent on gaining enough control of the company to cut its spending on new track and equipment in order to maximize short-term profits.

So the industry, though gaining in market share and profitability after decades of decline, is starved for capital. While its return on investment improved to a respectable 8 percent by the beginning of this decade, its cost of capital outpaced it at around 10 percent--and that was before the credit crunch arrived. This is no small problem, since railroads are capital intensive, spending about five times more just to maintain remaining rail lines and equipment than the average U.S. manufacturing industry does on plant and equipment. Increased investment in railroad infrastructure would produce many public goods,including fewer fatalities from truck crashes, which kill some 5,000 Americans a year. But public goods do not impress Wall Street. Nor does the long-term potential for increased earnings that improved rail infrastructure would bring,except in the eyes of Warren Buffett--who is bullish on railroads--and a few other smart, patient investors.

The alternative is for the public to help pay for rail infrastructure. Actually, it's not much of a choice. Unlike private investors,the government must either invest in shoring up the railroads' overwhelmed infrastructure or pay in other ways. Failing to rebuild rail infrastructure will simply further move the burden of ever-increasing shipping demands on to the highways, the expansion and maintenance of which does not come free. The American Association of State Highway and Transportation Officials (hardly as hill for the rail industry) estimates that without public investment in rail capacity 450 million tons of freight will shift to highways, costing shippers$162 billion and highway users $238 billion (in travel time, operating, and accident costs), and adding $10 billion to highway costs over the next twenty years. "Inclusion of costs for bridges, interchanges, etc., could double this estimate," their report adds.

# **AT: TIFIA CP**

#### TIFIA alone doesn’t solve - eligibility for freight rail is limited DOT, no date http://www.dot.ca.gov/hq/innovfinance/download/tifia\_prog\_fact\_sheet.pdf

Eligible Activities Any type of project that is eligible for Federal assistance through existing surface transportation programs (highway projects and transit capital projects) is eligible for the **TIFIA** credit program. In addition, **the following types of projects are eligible: international bridges and tunnels; inter-city passenger bus and rail facilities and vehicles** (including Amtrak and magnetic levitation systems); **and** publicly owned freight rail facilities, **private facilities providing public benefit for highway users**, intermodal freight transfer facilities, projects that provide access to such facilities, and service improvements on or adjacent to the National Highway System, and projects located within the boundary of a port terminal, so long as the project is limited to only such surface transportation infrastructure modifications as are necessary to facilitate direct intermodal interchange, transfer, and access into and out of the port.

# **Politics Answers**

#### No link – plan wouldn’t be a fight

**Longman, 2009** – Senior research fellow with New America Foundation, Schwartz senior fellow at Washington Monthly, senior writer and deputy assistant managing editor at U.S. News & World Report, graduate of Oberlin College, fellow at Columbia University (Phillip, “Back on Tracks”, The Washington Monthly, January/February 2009, http://www.newamerica.net/publications/articles/2009/back\_tracks\_9914)

Is all this politically feasible? Certainly more so than ayear ago, before the consensus formed that we must invest massively in infrastructure of some kind. Importantly, too, we're not talking about bailing out a failing industry, but about helping an expanding, more energy-efficient one to grow fast enough to meet pressing public needs. Nor would we be making big bets on unproven technology. Also, it's important to remember that big trucking companies, facing acute driver shortages and mounting highway congestion, are increasingly shifting their containers to rail and so have an interest in improved rail infrastructure. With trucking companies morphing into logistics companies, it's a new day in the special interest politics of freight.

# **Generic AT Spending**

#### N/U - Economy currently failing and unemployment consistently staying extremely high

**Portman, 6/13/12** – United States Senator for Ohio (Rob, “We Can Do Better On Economy”, Politico, June 13), <http://www.politico.com/news/stories/0612/77389.html>

**We are living through the weakest economic recovery since the Great Depression. More than 20 million Americans cannot find work**, have given up searching or have been forced to accept part-time jobs. We must do better. The **unemployment rate has remained above 8 percent for more than three years — the longest stretch since the Great Depression**. The average unemployed worker spends nearly 40 weeks looking for a job. That’s nine months of stress, uncertainty and wondering how to make ends meet. President Barack Obama correctly points out that he inherited this recession. But the question is: What did he do with it? His policies, unfortunately, have failed to turn things around. Typically, the steeper a recession, the stronger the recovery. In recoveries, millions of unemployed Americans return to work and idled factories, and resources are put in use again, giving the economy lots of room to grow. This is what occurred after the 1981-82 recession. In terms of unemployment, that recession was as deep as the most recent one was. The unemployment rate peaked at 10.8 percent, which is higher than the 10 percent peak in the recent recession. But the 1980s recession was followed by five consecutive quarters of strong economic growth rates of between 7 percent and 9 percent. The economy gained more than 1.1 million net [jobs](http://www.politico.com/news/stories/0612/77389.html) in a single month. By this point after the beginning of that recession, the economy had recovered all jobs lost in the downturn and gained 7 million new jobs. Obama promised his policies would bring a similarly steep recovery. However, in contrast to Ronald Reagan — who encouraged the recovery by reducing tax rates, cutting red tape and [limiting government](http://www.whitehouse.gov/omb/budget/Historicals/%22%20%5Ct%20%22_blank), Obama spent more than $800 billion on a stimulus bill, has supported far higher tax rates, jammed through Congress a government health care takeover and expanded regulation. Obama and his team promised the unemployment rate would fall below 6 percent by now with his stimulus bill. He also pledged to cut the budget deficit in half in his first term and reduce annual family health costs by up to $2,500. Instead, **the unemployment rate remains above 8 percent, $4 trillion has been added to the debt, this year’s budget deficit remains at well over $1 trillion and health care costs** [**continue**](http://www.politico.com/news/stories/0612/77389.html) **to rise**. Rather than follow a steep recession with a steep recovery, the economy grew only 1.7 percent last year. **Perhaps worst of all, we’re still 5 million net jobs down since the recession began.**

#### Link turn - transportation infrastructure projects would immediately create millions of jobs

**Johnson, 5/1/12** – Fellow of Campaign for America’s Future, (Dave, “Transportation and Infrastructure = Immediate Jobs = Deficit Reduction”, HuffPost, May 1, <http://www.huffingtonpost.com/dave-johnson/transportation-infrastruc_b_1469356.html>

President Obama spoke Monday at the AFL-CIO's Building and Construction Trades Department Legislative Conference in Washington, asking Republicans to stop blocking infrastructure and transportation projects. (See [transcript here](http://www.dailykos.com/story/2012/04/30/1087528/-Remarks-of-President-Obama-at-Buidling-and-Construction-Trades-Department-AFL-CIO-April-30-2012).) These projects would immediately create jobs, which would immediately start reducing the country's deficit -- which is probably why Republicans are blocking them. There are millions of infrastructure jobs that absolutely need doing. There are millions of people out of work who really, really need jobs. On top of that the cost of [financing](http://www.huffingtonpost.com/dave-johnson/transportation-infrastruc_b_1469356.html) is the lowest ever. So maintaining and modernizing our infrastructure would immediately put millions of people to work. But wait, there's more! Modernizing our infrastructure would make our economy more efficient and our businesses more competitive, bringing returns for decades. So, of course, with all these points going for it Republicans are blocking it. ... over the last year, I've sent Congress a whole series of jobs bills that would have put your members back to work. But time after time, Republicans have gotten together and said "no." I sent them a jobs bill that would have put hundreds of thousands of construction workers back to work repairing our roads, bridges, [schools](http://www.huffingtonpost.com/dave-johnson/transportation-infrastruc_b_1469356.html) and transit systems, along with saving the jobs of cops, teachers, and firefighters, and creating a new tax cut for businesses. They said "no." Then, I sent them just the part of that bill that would have created those construction jobs. They said "no." And we're seeing it again right now. As we speak, House Republicans are refusing to pass a bipartisan bill that could guarantee work for millions of construction workers. Seeing a pattern here? That makes no sense. Congress should do the right thing and pass this bill right away. Our aging infrastructure costs our economy. As things break down it gets harder to get things done. It is harder to start [new businesses](http://www.huffingtonpost.com/dave-johnson/transportation-infrastruc_b_1469356.html) and our businesses are less competitive in the world. Shipments are delayed, etc. There are other costs. [Cars](http://www.huffingtonpost.com/dave-johnson/transportation-infrastruc_b_1469356.html) have to be repaired from driving on our substandard roads, people have to pay higher fuel costs as they try to get where they are going on clogged streets or taking detours around closed bridges, etc. People's time is wasted, which also costs. As we move toward third-world status, property values decline, we lose tourism, etc.

#### Investing in infrastructure creates jobs and paves way for long-term economic growth – empirics show.

**Boushey, 9/22/11** – is Senior Economist at American Progress and has Ph.D in economics from New School for Social Research (Heather, “Now is the Time to Fix Our Broken Infrastructure”, Center for American Progress, September 22, <http://www.americanprogress.org/issues/2011/09/aja_infrastructure.html>)

[Investing](http://www.americanprogress.org/issues/2011/09/aja_infrastructure.html/) in infrastructure creates jobs and yields lasting benefits for the economy, including increasing growth in the long run. Upgrading roads, bridges, and other basic infrastructure creates jobs now by putting people to work earning good, middle-class incomes, which expands the consumer base for businesses. These kinds of investments also pave the way for long-term economic growth by lowering the cost of doing business and making U.S. companies more competitive. There is ample empirical evidence that investment in infrastructure creates jobs. In particular, investments made over the past couple of years have saved or created millions of U.S. jobs. Increased investments in infrastructure by the Department of Transportation and other agencies due to the American Recovery and Reinvestment Act saved or created 1.1 million jobs in the construction industry and 400,000 jobs in manufacturing by March 2011, according to San Francisco Federal Reserve Bank economist Daniel Wilson.[1] Although infrastructure spending began with government dollars, these investments created jobs throughout the economy, mostly in the private sector.