# NEGATIVE

## Econ – Adv Answers

### 1nc - Economy

#### 1. Economic benefits are exaggerated – studies prove

BUTTON 3 – 16 – 12 Professor – George Mason University School of Public Policy

[Kenneth Button, Is there any economic justification for high-speed railways in the United States?, 16 March 2012. Journal of Transport Geography, Volume 22, May 2012, Pages 300–302]

Full economic analysis of the potential HSR in the US is relatively limited, and tends to be of a narrow economic impact kind, e.g. regarding Florida (Lynch, 2002) and California (Bay Area Council Economic Institute, 2008). Edward Glaeser has critiqued the case for HSR in the US, and in particular the costs and benefits of a link between Dallas and Houston9 that he estimates would entail a net social cost of about $490 million a year (Table 1).

Any ex ante economic analysis of HSR involves a high degree of uncertainty in forecasting (Brownestone et al., 2010). Some of the problems are of a purely technical kind in specifying underlying factors influencing costs and utilization, but there is often a significant degree of capture of predictions by those favoring a particular policy. This is highlighted by [Flyvbjerg et al., 2002] and [Flyvbjerg et al., 2010] who, looking at forecasting across a range of countries, found a tendency for over-prediction of capacity utilization and under-prediction of the outcome costs of investments, e.g. for ten rail projects examined, the passenger forecasts overestimated traffic by 106% while costs of 58 rail projects indicate overruns averaging nearly 45%; 40.8% for US projects.10

#### 2. No empirical support for economic benefits – can’t be tested

LEVINSON 12 Networks, Economics, and Urban Systems Research Group, University of Minnesota, Department of Civil Engineering research was funded by New York University

[David M. Levison, “Accessibility impacts of high-speedrail,” Journal of Transport Geography, Volume 22, May 2012, Pages 288–291. Special Section on Rail Transit Systems and High Speed Rail]

3. Economic development effects

There is no grounded empirical work to date on the economic development impacts of high-speedrail in the United States, since such services do not exist. Little has been written from objective (as opposed to vested) sources. The Congressional Research Service has tried to balance the arguments (Peterman et al., 2009).

The job estimates from California4 would be enormous if they could be validated. A single infrastructure project creating 450,000 jobs (out of a total civilian employment of under 16 million5) gives a total of almost 3% of the state’s workforce. The construction related jobs alone are 1% of the state’s workforce. Presently, construction is estimated at 577,000 jobs, so this project would absorb on the order of one-third to one-fourth of all construction jobs in the state.

While the propaganda of project promoters may not be plausible, logically there are some regional effects. An argument could be made about strengthening intercity linkages to refashion the current metropolitan system into a megalopolitan system, where people more regularly interact between cities. One could envision this as Switzerland writ large. If, as Adam Smith suggests, the division of labor is limited by the extent of the market, and transportation can be used to expand the market, the division of labor can therefore increase (i.e. be more specialized), which should have some positive effects for the economy (akin to agglomeration economies). Melo et al. (2009) conduct a meta-analysis of estimates of urban agglomeration economies from 34 studies. The ranges of effects are quite large, and no clear conclusions about the magnitudes can be drawn. The authors write “The findings support the intuition that agglomeration estimates for any particular empirical context may have little relevance elsewhere.”

#### 3. Economic models assume ideal HSR – the plan isn’t that

LEVINSON 12 Networks, Economics, and Urban Systems Research Group, University of Minnesota, Department of Civil Engineering research was funded by New York University

[David M. Levison, “Accessibility impacts of high-speedrail,” Journal of Transport Geography, Volume 22, May 2012, Pages 288–291. Special Section on Rail Transit Systems and High Speed Rail]

High-speedrail lines have been built and proposed in numerous countries throughout the world. The advantages of such lines are a higher quality of service than competing modes (air, bus, auto, conventional rail), potentially faster point-to-point times depending on specific locations, faster loading and unloading times, higher safety than some modes, and lower labor costs. The disadvantage primarily lies in higher fixed costs, potentially higher energy costs than some competing modes, and higher noise externalities. Whether the net benefits outweigh the net costs is an empirical question that awaits determination based on location specific factors, project costs, local demand, competition, and network effects (depending on what else in the network exists). The optimal network design problem is hard (in the mathematical sense of “hard”, meaning optimal solutions are hard to find because of the combinatoric possibilities of different network configurations), so heuristics and human judgment are used to design networks.

The network architecture of high-speedrail lines has tended to be in a hub-and-spoke pattern, connecting a hub city (e.g. Paris, Madrid, Tokyo) to secondary cities in tree-like architecture. The networks have occasional crossing links, typically at both lower speed, lower frequency, and lower cost of construction than the mainline. As these systems were designed nationally, and the largest city is often the capital (as in Paris, Madrid, and Tokyo), which is also (roughly) centrally located, it is no surprise that the hub was based where it was. Germany has fewer very highspeed links (faster than 300 km/h), and a flatter (less-hubbed) network, perhaps reflecting its strong federalism, relative decentralization into a multi-polar urban structure and late formation into a nation-state. Italy has centered its hub in Milan, the largest metropolitan area in the country.

The reason for the hub-and-spoke architecture is to achieve economies of density in track usage and network effects at the hub city which enable frequent service to multiple destinations. Multiple paths between origins and destinations would diffuse the network effects and result in less frequent service, and therefore reduce demand. The hub-and-spoke architecture, while benefitting the network as a whole when demand is insufficient to enable frequent point-to-point service, clearly serves the hub cities the most, as they gain from all the incoming flows which create additional demand, and thus greater service. In air transportation, airlines often use hub-and-spoke networks, and if they have a large market share at a hub airport, will use that advantage to charge a premium for travel, thereby capturing some, if not all, of the benefits consumers receive from being located in a hub airport city.

2. Hubs and spokes

“The spatial impacts of the new lines will be complex. They will favour the large central cities they connect, especially their urban cores, and this may threaten the position of more peripheral cities.” (Hall, 2009)

“[T]he wider economic benefits of high-speedrail are difficult to detect, as they are swamped by external factors”, but are likely to be larger in more central locations than more peripheral locations.” (Preston and Wall, 2008)

As used here, a hub is a center of activity, from which multiple (at least three) spokes (links connecting the hub with other locations) emanate. On a network with a tree structure, the primary hub is the point from which the maximum number of spokes emerge. There may be secondary and tertiary hubs on the network as well.

The proposed US Program (Upper Right of Fig. 1) has no well-thought out national architecture. There were a number of independent proposals that have been drawn on a single map. These can be thought of as hubs (metro area 2010 Census ranking in parentheses) based in New York (1), Los Angeles (2), Chicago (3), Dallas (4), Atlanta (9), Phoenix (14), Seattle (15), Denver (21), and Orlando (26).1 The Florida network (Orlando Hub) has been canceled by the Governor, though in transportation, nothing is permanently dead. The US High-speedRail Association network includes even more cities.

#### 4. Economic declines don’t cause conflict

BARNETT 09 senior managing director of Enterra Solutions LLC, contributing editor/online columnist for Esquire

[Thomas P.M, “The New Rules: Security Remains Stable Amid Financial Crisis,” Aprodex, Asset Protection Index, 8/25/9, <http://www.aprodex.com/the-new-rules--security-remains-stable-amid-financial-crisis-398-bl.aspx>]

When the global financial crisis struck roughly a year ago, the blogosphere was ablaze with all sorts of scary predictions of, and commentary regarding, ensuing conflict and wars -- a rerun of the Great Depression leading to world war, as it were. Now, as global economic news brightens and recovery -- surprisingly led by China and emerging markets -- is the talk of the day, it's interesting to look back over the past year and realize how globalization's first truly worldwide recession has had virtually no impact whatsoever on the international security landscape.

None of the more than three-dozen ongoing conflicts listed by GlobalSecurity.org can be clearly attributed to the global recession. Indeed, the last new entry (civil conflict between Hamas and Fatah in the Palestine) predates the economic crisis by a year, and three quarters of the chronic struggles began in the last century. Ditto for the 15 low-intensity conflicts listed by Wikipedia (where the latest entry is the Mexican "drug war" begun in 2006). Certainly, the Russia-Georgia conflict last August was specifically timed, but by most accounts the opening ceremony of the Beijing Olympics was the most important external trigger (followed by the U.S. presidential campaign) for that sudden spike in an almost two-decade long struggle between Georgia and its two breakaway regions.

Looking over the various databases, then, we see a most familiar picture: the usual mix of civil conflicts, insurgencies, and liberation-themed terrorist movements. Besides the recent Russia-Georgia dust-up, the only two potential state-on-state wars (North v. South Korea, Israel v. Iran) are both tied to one side acquiring a nuclear weapon capacity -- a process wholly unrelated to global economic trends.

And with the United States effectively tied down by its two ongoing major interventions (Iraq and Afghanistan-bleeding-into-Pakistan), our involvement elsewhere around the planet has been quite modest, both leading up to and following the onset of the economic crisis: e.g., the usual counter-drug efforts in Latin America, the usual military exercises with allies across Asia, mixing it up with pirates off Somalia's coast). Everywhere else we find serious instability we pretty much let it burn, occasionally pressing the Chinese -- unsuccessfully -- to do something. Our new Africa Command, for example, hasn't led us to anything beyond advising and training local forces.

### Economy Growing

#### Growing & adding jobs

BUSINESS WEEK 5 – 3 – 12

PAUL WISEMAN, AP survey: Steady job gains to sustain US recovery, <http://www.businessweek.com/ap/2012-05/D9UH2VS00.htm>

Hiring through the rest of 2012 will lag the brisk pace set early this year. But it will be strong enough to push the unemployment rate below 8 percent by Election Day.

That's the view that emerges from an Associated Press survey of 32 leading economists who foresee a gradually brighter jobs picture. Despite higher gas prices, Europe's debt crisis and a weak housing market, they think the economy has entered a "virtuous cycle" in which hiring boosts consumer spending, which fuels more hiring and spending.

The survey results come before a report Friday on hiring during April. The April report is eagerly awaited because employers added surprisingly few jobs in March. That result contributed to fears that the economy might struggle to sustain its recovery

But the economists think the recovery will manage to reduce unemployment to 7.9 percent by Election Day from 8.2 percent in March.

### Ext 1 – Econ Benefits Exagg

#### No economic benefit – numbers are exaggerated and poorly defended

BUTTON 3 – 16 – 12 Professor – George Mason University School of Public Policy

[Kenneth Button, Is there any economic justification for high-speed railways in the United States?, 16 March 2012. Journal of Transport Geography, Volume 22, May 2012, Pages 300–302]

An underlying argument for the development of HSR is that, following Aschauer’s (1989) work, virtually any form of infrastructure investment generates a significant economic return. Winston (1991) and others, however, highlight the limitations of this, pointing to serious statistical problems of aggregation and specification bias in the empirical work that has been done. Aggregate data, however, does provide policy-makers with superficial arguments for investing especially when ex ante studies focus on the benefits of the investment with little discussion of the opportunity costs involved. But even at the micro-level there are a number of issues. Flyvbjerg et al. (2010) point to a number of factors influencing the situation. Informed debate requires full, or at least nearly, full and impartial information; asymmetric information can lead to strategic deception, a particular problem when there are divisions between principals and agents. In the case of HSR much of the planning and project appraisal is done at the local level, with at least part of the funding coming from central government. The problem is particularly acute if powerful individuals, groups, or coalitions, are in a position to use public moneys for essentially their own narrow interests; the “Bridge to Nowhere” situation; in the HSR case it is the lobbying of “gricers”, to use an English term, that is the problem.11

#### Economic Benefits of HSR exaggerated

GLAESER 09 economics professor at Harvard

Edward L. Glaeser, Is High-Speed Rail a Good Public Investment?, <http://economix.blogs.nytimes.com/2009/07/28/is-high-speed-rail-a-good-public-investment/>

Yet the public must be wary every time our leaders decide to spend billions of our tax dollars

The Government Accountability Office’s comprehensive report on high-speed rail that reminds us that

While some U.S. corridors have characteristics that suggest economic viability, uncertainty associated with rider and cost estimations and the valuation of public benefits makes it difficult to make such determinations on individual proposals. Research on rider and cost has shown they are often optimistic and the extent that U.S. sponsors quantify and value public benefits vary.

The founders of transportation economics, like John Meyer and the deeply missed John Kain, found that the benefits of passenger rail rarely exceeded the costs.

Their views were caricatured by generations of Harvard graduate students as “Bus Good, Train Bad.” Is money really better spent on fast trains than on educating our children?

#### Economic benefits are low – qualified author doing the math

GLAESER 09 economics professor at Harvard

Edward L. Glaeser, Running the Numbers on High-Speed Trains, <http://economix.blogs.nytimes.com/2009/08/04/running-the-numbers-on-high-speed-trains/>

Is President Obama’s vision of hyper-fast trains racing through America a sound transportation policy or a costly boondoggle? Last week, I began a four-part series on the costs and benefits of high-speed rail. The readers of last week’s post seemed particularly eager to get to traffic congestion and the environment, but space constraints compel me to push these off until next week. Today I will get mired in the sometimes dull arcana of rail costs and direct benefits to users

I’m going to frame the discussion around an imaginary 240-mile link between Dallas and Houston, but the basic formula for direct costs and benefit is general

Number of Riders times (Benefit per Rider minus Variable Costs per Rider) minus Fixed Costs.

I’m simplifying, but a formula needs to be simple if interested parties can seriously debate the numbers, and the only way that America is going to get to the right answer on public investments is if numbers trump rhetoric. I will plug illustrative figures into the formula, but not only am I well aware that every number here is debatable, I am hoping for just that debate.

Last week, I cited data from the Government Accountability Office suggesting that $50 million a mile was a reasonable construction cost figure. To make this one-time cost comparable to everything else, which is an annual flow, the fixed cost needs to be converted into an annual cost, which is done by multiplying by an interest rate, capturing the opportunity cost of capital. If that cost of capital is 5 percent (as I said, everything is debatable), then the up-front capital cost is $2.5 million a mile per year, or $600 million for a 240-mile line.

The other cost that is independent of the number of riders is track maintenance. One recent European estimate puts that cost at $140,000 a mile per year for a two-track system. A feasibility study of high-speed rail in Britain came up with the considerably higher figure of $493,000 a mile for surface trains. I’ll stay closer to the lower estimate and go with $200,000 a mile per year, which brings the fixed costs of the track up to $648 million per annum

Other train costs — rolling stock purchase and maintenance, personnel — more or less scale up or down with the number of passenger miles. Unfortunately, there is plenty of range on these cost estimates. A 12-year-old classic in this field has a number of 10.5 cents a mile (in today’s dollars), but one recent European study comes out at 50 cents a passenger mile. Amtrak’s operating expenses run at about 45 cents a passenger mile. I’ll average between 10 and 50 and plug in 30 cents a passenger mile in operating costs, which comes to $72 for a 240-mile trip.

I estimate benefits by comparing rail to air. A train going from Dallas to Houston at 150 miles an hour would take 96 minutes. Southwest Airlines takes an hour for the same route, but the need to arrive early could add on an extra hour. I’ll add on an extra 36 minutes for the driving time to the airports, which means that the train saves an hour. The per-passenger benefit from the high-speed rail line is the saved cost of the Southwest ticket ($80) plus an hour’s worth of time (let’s say $40, which seems generous), plus any added benefits from the comfort of the train (let’s say $20 more). All told, benefits per trip are $140. Since the variable costs are $72 for the trip (30 cents a mile times 240 miles), benefits minus variable costs come to $68 a trip. If these numbers were right (and I think that they are very kind to rail), then the system should be able to run a healthy operating surplus.

How many riders will take high-speed rail between Houston and Dallas? Amtrak gets about 11 million customers in the Northeast Corridor, which has four large consolidated metropolitan areas together totaling 44 million people. If that four-to-one ratio held in Texas, then the high-speed rail link could expect three million riders, and more to come as Texas grows.

But as President Obama has said one of the appeals of high-speed rail is “walking only a few steps to public transportation, and ending up just blocks from your destination.” That’s bad news for Texas. In Dallas less than 5 percent of the population takes public transportation to work, and more than 60 percent of all jobs are more than 10 miles from the city center. For these reasons, driving will continue to be extremely attractive for travelers who want to save parking fees and need cars once they arrive. I’ll go with 1.5 million trips a year (even including future growth), which would make the new rail line about as popular as all airplane flights between the two cities are today

Now it’s just down to multiplying: 1.5 million trips times $68 a trip means $102 million for benefits minus operating costs. Annual capital costs came in $648 million, more than six times that amount. If you think that the right number is three million trips, then the benefits rise to $200 million, and the ratio between the per rider net benefits and costs drops to one-to-three. This is the cruel arithmetic faced by people, like myself, who would love to be pro-rail. One hint for train lovers who would like to make this comparison look better: make a compelling case that the interest rate should be much lower, as nothing else makes nearly as much difference. Also keep in mind that I haven’t brought in the environment or congestion. They’re up next week.

### Depends on Station

#### Station location key to economic benefits

TODOROVICH, SCHNED, & LANE 11 1. director of America 2050, a national urban planning initiative, assistant visiting professor at the Pratt Institute Graduate Center for Planning and the Environment and a member of the Board of Advisors of the Eno Transportation Foundation, Masters in City and Regional Planning from the Bloustein School of Planning and Public Policy at Rutgers University 2. associate planner for America 2050 at Regional Plan Association part-time lecturer at the Edward J. Bloustein School of Planning and Public 3. senior fellow for urban design at Regional Plan Association and a founding principal of Plan & Process LLP. Loeb Fellow at the Harvard Graduate School of Design

[Petra Todorovich, Daniel Schned, and Robert Lane, High-Speed Rail: International Lessons for U.S. Policy Makers, September 2011, Lincoln Institute of Land Policy, Policy Focus Report]

Station Location and Design: A Typology and Case Studies The potential of high-speed rail to promote urban regeneration in conjunction with new or enhanced rail stations is one of its most promising economic beneﬁts (U.S. Conference of Mayors 2010). The experience with land development around high-speed rail stations has been mixed, but one thing is clear: highspeed rail cannot generate growth by itself. High-speed rail can play a prominent role in economic regeneration, but it is difﬁcult to isolate its impacts from other complementary actions that are necessary to stimulate a larger economic development success story (Givoni 2006). To take advantage of high-speed rail’s potential land development beneﬁts, cities must adopt policies and planning strategies that encourage station-related development and undertake careful planning of the track routing, station location, and intermodal transportation connections. Signiﬁcant land development effects have been documented more frequently in places with robust regional economies and linkages with other transportation modes, especially rail transit links to nearby urban centers, and places with public sector support for policies that encourage development (Sands 1993; Greengauge 21 2006). High-speed rail stations have been located in almost every setting—from the highest density centers of major cities to the most pastoral landscapes. In each case, the location reﬂects a complex interaction of physical, economic, logistical, and political considerations. Similarly, the designs of the stations illustrate rich variety, from the modernization and adaptive reuse of historic buildings to the construction of completely new, purpose-built structures. It is difﬁcult to generalize across all of these conditions, but existing European stations suggest a typological framework that may help to guide planning for high-speed rail in the United States (ﬁgures 10a and 10b). In particular, different station locations necessarily create a different dynamic between existing concentrations of activities and the increased access provided by high-speed rail. Center-of-city stations can reinforce established concentrations of development. Their potential to spur further development is often magniﬁed by the connectivity of the existing urban fabric and the extent of nearby transit connections. Edge-of-city stations can alter the center of gravity of a city’s core and spur redevelopment of underutilized areas at the urban periphery. Suburban and exurban stations can create new centers that concentrate growth around the station or enable corridor development between the station and a nearby existing node. In some cases, such stations are located too far from the key regional destinations and fail to attract much ridership or spinoff development. Special purpose stations can either retain their narrow function as intermodal facilities, such as airports, or can develop as mixed-use centers in themselves.

### Mixed Evidence

#### No guarantee of economic benefits – need other efforts

TODOROVICH, SCHNED, & LANE 11 1. director of America 2050, a national urban planning initiative, assistant visiting professor at the Pratt Institute Graduate Center for Planning and the Environment and a member of the Board of Advisors of the Eno Transportation Foundation, Masters in City and Regional Planning from the Bloustein School of Planning and Public Policy at Rutgers University 2. associate planner for America 2050 at Regional Plan Association part-time lecturer at the Edward J. Bloustein School of Planning and Public 3. senior fellow for urban design at Regional Plan Association and a founding principal of Plan & Process LLP. Loeb Fellow at the Harvard Graduate School of Design

[Petra Todorovich, Daniel Schned, and Robert Lane, High-Speed Rail: International Lessons for U.S. Policy Makers, September 2011, Lincoln Institute of Land Policy, Policy Focus Report]

However, some new high-speed rail stations have not experienced appreciable economic effects. For example, TGV stations were located on the outskirts of the cities of Le Creusot and Haute Picardie to be more accessible by automobile. However, their remoteness and the dearth of existing business activity discouraged investment and failed to attract development to the area (Greengauge 21 2006). Facchinetti-Mannone (2009) has observed that peripheral stations usually are not as well-integrated into the surrounding transportation networks or into the urban areas they serve. Attempts to mitigate this problem with shuttle services have been only moderately successful, since they still require an additional intermediary trip. The case of Avignon suggests that even when a peripheral station is close to the city center, the potential beneﬁts of high-speed rail are diluted, and the new station instead may have negative impacts on the center-city station area because it creates a different competitive dynamic.

SUMMARY

Four European rail station case studies point to a variety of experiences with high-speed rail and development impacts. It is difﬁcult to isolate and quantify the speciﬁc impacts of high-speed rail service alone because the most successful high-speed rail initiatives are part of larger urban redevelopment plans that include collateral investments and policies. However, it is clear that high-speed rail service in itself will not guarantee development around a station. Center-city locations generally are more advantageous than peripheral sites, but the case studies reveal the degree to which the beneﬁts of high-speed rail in any given location are moderated by the existing physical and economic circumstances. These observations can guide corridor and station location decisions in the United States and other countries contemplating the introduction of high-speed rail systems.

#### Mixed evidence of economic benefits

TODOROVICH, SCHNED, & LANE 11 1. director of America 2050, a national urban planning initiative, assistant visiting professor at the Pratt Institute Graduate Center for Planning and the Environment and a member of the Board of Advisors of the Eno Transportation Foundation, Masters in City and Regional Planning from the Bloustein School of Planning and Public Policy at Rutgers University 2. associate planner for America 2050 at Regional Plan Association part-time lecturer at the Edward J. Bloustein School of Planning and Public 3. senior fellow for urban design at Regional Plan Association and a founding principal of Plan & Process LLP. Loeb Fellow at the Harvard Graduate School of Design

[Petra Todorovich, Daniel Schned, and Robert Lane, High-Speed Rail: International Lessons for U.S. Policy Makers, September 2011, Lincoln Institute of Land Policy, Policy Focus Report]

A case study in Germany (box 1) exempliﬁes increased economic beneﬁts associated with high-speed rail, but in other cases the results have fallen short of expectations. This mixed evidence underscores the importance of ensuring that transportation connections, station locations, urban development, and promotional strategies are in place to maximize the economic impact of this capital-intensive investment.

### Ext 3 – Benefits assume perfect

#### HSR doesn’t boost the economy – not a good form of Keynesian spending – needs imports

BUTTON 3 – 16 – 12 Professor – George Mason University School of Public Policy

[Kenneth Button, Is there any economic justification for high-speed railways in the United States?, 16 March 2012. Journal of Transport Geography, Volume 22, May 2012, Pages 300–302]

2. Conclusions

HSR is not currently a commercial proposition except in very exceptional cases and the conditions that make for these exceptions hardly exist in the US. This does not mean that there should be no HSR investment, or that circumstances may not significantly change in some unforeseen way in the future, but it does suggest that investments should be carefully targeted and tailored to circumstances. It also means that throwing some arbitrarily determined aggregate sum of money at a hodgepodge of projects is unlikely to produce any major social return. The macro-economic justifications for public expenditure stimuli of the type seen from 2008 can be debated, but even if there is a case for it, there are good arguments in a world of international trade in spending the money on investments that yield a positive long-term national economic return.12 Simply stimulating an open economy by increasing public indebtedness inevitably pulls in imports, unless it more than proportionately enhances the economic efficiency of the nation’s economy. The Spanish idea that all major cities should be linked by HSR or the US’s idea that 80% of the population should have access to HSR, both concepts paying no regard to cost or demand, are arbitrary with no solid foundation in analysis, and as countries such as Spain have found out can have serious adverse consequences on employment and the well-being of future generations.

### Lots of costs

#### Massive short & long term costs

GAO 11 CONGRESSIONAL DIGEST - High-Speed Rail Overview System Components, Potential, and Cost Issues

[From the Library of Congress, Congressional Research Service, report High Speed Rail (HSR) in the United States, http://www.bafuture.org/sites/default/files/High%20Speed%20Rail%20%20in%20US%20CRS%2012.8.09.pdf]

■ High-Speed Rail Cost Issues

The costs of HSR can be divided into two general categories: infrastructure costs, including the costs of building the line and maintaining it, and operating costs, such as labor and fuel, which tend to vary according to the amount of train service offered. Of the many high-speed routes in the world, it is thought that only two have earned enough revenue to cover both their infrastructure and operating costs.

Infrastructure Costs. High-speed rail requires a significant up-front capital outlay for development of the fixed infrastructure (right-of-way, track, signals, and stations) and for its upkeep; however, system costs are highly site and project-specific. A leading determinant of cost is whether a new right-of-way is planned or if an existing railroad right-of-way is going to be improved. Another key cost determinant is speed. Generally, as speed increases, the cost of providing the infrastructure to attain that speed rises at an increasing rate. The highest speeds will require grade-separated corridors, reduced curvature and reduced gradients (otherwise passengers will experience extreme discomfort at high-speeds), and a possible shift from diesel-electric power to electric power that will require installation of catenary over the entire route as well as electric power sub-stations. As speed increases, the type of train signaling and communication system must be more advanced (and costly) to ensure safe operations. Building a route through mountainous terrain is more costly than construction on level terrain, and building a route through an urban area is costlier than construction in a rural area.

Operating Costs. In addition to infrastructure costs, operating costs, such as labor, fuel, or electric power, and other costs that vary depending on the number of trains that are operated, can be a significant public expense if the train operator cannot generate sufficient ridership to cover these costs with ticket revenue. Unlike the airline and intercity bus (at least on some routes) industries, where competition among carriers is credited with spurring efficiencies, such as the “low-cost” carrier phenomenon, Amtrak has often been criticized for complacency in pursuing cost savings. As the DOT inspector general has stated, “Amtrak, as the sole provider of intercity passenger rail service, has few incentives, other than the threat of budget cuts or elimination, for cost control or delivery of services in a costeffective way.” There are some obstacles to opening up intercity passenger rail service to competition, however. Outside the NEC, passenger trains run mostly on freight-owned track to which Congress has given Amtrak favorable access terms; these terms of access would not necessarily transfer to an alternative operator. Also, accommodating multiple train operators over the same track is difficult because of the problem of allocating train slots fairly among competing firms.

### A2 creates jobs

#### No correlation of growth – people just shift where they are working

LEVINSON 12 Networks, Economics, and Urban Systems Research Group, University of Minnesota, Department of Civil Engineering research was funded by New York University

[David M. Levison, “Accessibility impacts of high-speedrail,” Journal of Transport Geography, Volume 22, May 2012, Pages 288–291. Special Section on Rail Transit Systems and High Speed Rail]

Nakamura and Ueda (1989) (cited in Sands, 1993) finds three of the six prefectures in Japan with a Shinkansen station had higher population growth than the national average between 1980 and 1985, while no prefecture without the Shinkansen grew faster than the national average. Whether the causality is that the rail caused the growth or areas expected to grew attracted investment is unclear. Similar studies conducted of metropolitan growth find results that suggest that Shinkansen and growth are correlated (e.g. Hirota, 1984 reported in Brotchie, 1991), but again the causal structure is not clear. Recent studies suggest the effects of the newer Shinkansen lines are not as favorable as earlier lines (Nakagawa and Hatoko, 2007). Sands (1993) concludes the Shinkansen has shifted growth, but not induced it.

### A2 tourism

#### Tourism is neutral – more likely to go home than stay overnight

LEVINSON 12 Networks, Economics, and Urban Systems Research Group, University of Minnesota, Department of Civil Engineering - research was funded by New York University

[David M. Levison, “Accessibility impacts of high-speedrail,” Journal of Transport Geography, Volume 22, May 2012, Pages 288–291. Special Section on Rail Transit Systems and High Speed Rail]

Albalate and Bel (2010) report “Esteban Martı´n (1998) claims that cities served by HighSpeed Trains (HSTs) benefit from improved accessibility, but at the same time there is a downgrading of conventional train services and air services on those lines where a HST alternative exists. HSTs do not appear to attract advanced services companies, which show no greater propensity to locate in areas neighboring HST railway stations. And while business tourism and conferences benefit from HST services, a reduction in the number of overnight stays cuts tourist expenditure and the consumption of hotel services. Interestingly, while a HST line improves accessibility between the cities connected by the service, it disarticulates the space between these cities – what has been referred to as the tunnel effect (Gutiérrez Puebla and Garcı´a Palomares, 2005). Hence, HST lines do not seem to increase inter-territorial cohesion, but rather they promote territorial polarization”.

### Ext 4 – Econ decline doesn’t cause conflict

#### History disproves the link between the economy and conflict

FERGUSON 06 Laurence A. Tisch Professor of History at Harvard, a Senior Research Fellow of Jesus College at Oxford, and a Senior Fellow of the Hoover Institution

[Niall Ferguson, “The War of the World”, Penguin Books, pg. xxxviii]

Nor can economic crises explain all the violent upheavals of the century. As noted already, perhaps the most familiar causal chain in modern historiography leads from the Great Depression to the rise of fascism and the outbreak of war. Yet on closer inspection this pleasing story falls apart. Not all the countries affected by the Great Depression became fascist regimes; nor did all the fascist regimes engage in wars of aggression. Nazi Germany started the war in Europe, but only after its economy had recovered from the Depression. The Soviet Union, which started the war on Hitler’s side, was cut off from the world economic crisis, yet ended up mobilizing and losing more soldiers than any other combatant. For the century as a whole, no general rule is discernible. Some wars came after periods of growth; others were the causes rather than the consequence of economic crisis. And some severe economic crisis did not lead to wars. Certainly, it is now impossible to argue (thought Marxists long tried to) that the First World War was the result of a crisis of capitalism; on the contrary, it abruptly terminated a period of extraordinary global economic integration with relatively high growth and low inflation.

## Enviro – Adv Answers

### 1nc – Environment

#### 1. Minimal environmental benefits – c02 trade off isn’t large enough

GLAESER 09 economics professor at Harvard

Edward L. Glaeser, How Big Are the Environmental Benefits of High-Speed Rail?, <http://economix.blogs.nytimes.com/2009/08/12/how-big-are-the-environmental-benefits-of-high-speed-rail/>

Trains reduce carbon emissions and the world should reduce its carbon footprint, but those two facts don’t make the case for rail. Trains make sense only if they are a cost-effective means of reducing carbon in the atmosphere, or whether the social benefit of eliminating 113 pounds of carbon dioxide emissions can outweigh the costs of rail.

A recent review article looked at the dollar cost to the world of each additional ton of carbon dioxide emissions. Most estimates found that a ton of carbon dioxide causes less than $20 worth of damage. Put another way, eliminating a ton of carbon dioxide would bring about $20 worth of benefits. (The one big outlier to these estimates, the Stern Report, shows the benefits of reducing carbon dioxide to be $85 a ton, but that figure has been widely disputed.)

A better way to evaluate the benefit of reducing carbon emissions by rail is to look at the cost of reducing carbon emissions by means other than rail. In current carbon offset markets, the average price of an offset is $7.34 for each ton of carbon dioxide. Technologies like carbon capture and sequestration seem to offer the possibility of reducing emissions for less than $50 a ton of carbon dioxide emissions eliminated.

I’ll assume a environmental benefit of $50 for eliminating a ton of carbon dioxide emissions. With this figure, the total global-warming-related benefit of 1.5 million high-speed riders taken equally from cars and planes is $4.24 million a year

The National Safety Council estimates the total losses due to traffic accidents in 2008 as $237.2 billion. There were about 3 trillion vehicle miles, and 1.63 people per vehicle, so all this safety cost of cars comes to 4.8 cents a passenger mile (which is more than double more standard estimates). Using this 4.8 cent figure, a rail line that displaces 750,000 drivers creates an extra $8.73 million a year of traffic safety benefit.

A standard estimate is that cars create 5 cents of congestion damage for each vehicle mile of travel. From the same source, I’ll add in another 2.7 cents per vehicle mile to cover local pollution, fuel dependency issues and road maintenance. This works out to another $8.67 million worth of benefits from reducing the number of drivers by 750,000

Combining reduced carbon emissions, reduced congestion and reduced traffic mortality provides an extra $21.63 million worth of benefits a year from the rail line, which increases the $102 million benefit minus operating costs figure from last week to $124 million, which is still far less than the $648 million estimated cost per year of building and maintaining the infrastructure

The environmental and mortality benefits of rail are real, but the magnitude of the social benefits from switching modes seems is quite small relative to the cost of the system.

#### 2. Environmental impact numbers need to assume technological improvements – cars & planes are getting better

LEVINSON 12 Networks, Economics, and Urban Systems Research Group, University of Minnesota, Department of Civil Engineering - research was funded by New York University

[David M. Levison, “Accessibility impacts of high-speedrail,” Journal of Transport Geography, Volume 22, May 2012, Pages 288–291. Special Section on Rail Transit Systems and High Speed Rail]

True HSR in the US (not the short term improvements to get to 90 or 110 MPH, which may or may not be a good thing, but are certainly not high-speed) is a long term deployment, so it needs to be compared with cars 10 or 20 or 30 years hence, and the air transportation system over the same period. Cars are getting better from both an environmental perspective and from the perspective of automation technologies. The DARPA Urban Challenge vehicles, and subsequent development by those engineers working at Google, need to be bested to justify HSR. Cars driven by computers, which while sounding far off, are technologically quite near, and should be able to attain relatively highspeeds (though certainly not HSR speeds, in mixed traffic). Further they may move less material per passenger than HSR (trains are heavy), and so may net less environmental impact if electrically powered. These vehicles, which reduce the need for attention from drivers, will likely encourage longer trips by car, which will eat into both rail and air market shares. Aviation is improving as well, both in terms of its environmental impacts and its efficiency. Socially-constructed problems like aviation security or congestion can be solved for far less money than is required for any one high-speedrail line given sufficient will.

#### 3. No impact --- warming will be slow and predictable

MICHAELS 03 senior fellow in environmental studies at the Cato Institute

[Patrick J. Michaels, 2003, , 10/16/2003The Washington Times]

Here's what every American needs to know about global warming. Contrary to almost every news report and every staged hearing, including one held by Mr. McCain on Oct. 1, scientists know quite precisely how much the planet will warm in the foreseeable future, a modest three-quarters of a degree (C), plus or minus a mere quarter-degree, according to scientific figures as disparate as this author and NASA scientist James Hansen. The uncertainty is so small, in fact, that publicly crowing this figure is liable to result in a substantial cut in our research funding, which is why the hundreds of other scientists who know this have been so reluctant to disgorge the truth in public. All this has to do with basic physics, which isn't real hard to understand. It has been known since 1872 that as we emit more and more carbon dioxide into our atmosphere, each increment results in less and less warming. In other words, the first changes produce the most warming, and subsequent ones produce a bit less, and so on. But we also assume carbon dioxide continues to go into the atmosphere at an ever-increasing rate. In other words, the increase from year-to-year isn't constant, but itself is increasing. The effect of increasing the rate of carbon dioxide emissions, coupled with the fact that more and more carbon dioxide produces less and less warming compels our climate projections for the future warming to be pretty much a straight line. Translation: Once human beings start to warm the climate, they do so at a constant rate. And yes, it's a sad fact that it took $10 billion of taxpayer money to "prove" something so obvious it can be written in a mere 100 words.

#### 4. Turn – Building Rail will spike global emissions - any savings are too long term

WESTINA & KAGESONA 12 a Centre for Transport Studies, Royal Institute of Technology b Department of Transport Science, Royal Institute of Technology. Both in Stockholm Sweden

[Jonas Westina, Per Kågesona, Can high speed rail offset its embedded emissions?, Transportation Research Part D: Transport and Environment, Volume 17, Issue 1, January 2012, Pages 1–7]

1. Introduction

Although high speed in all modes of transport comes at the price of negative environmental impact, many environmentalists, and the companies and interest organizations of the rail sector, claim that high-speed rail is environmentally beneficial and should be allowed to form an important part of climate change mitigation. Independent research, on the other hand, concludes that these benefits may not be that large.1

The embedded CO2 emissions from constructing and maintaining a high speed link is often substantial, partly because of the extensive use of steel and concrete, which are highly energy intensive in their production (Network Rail, 2009). For a new investment in high-speed rail to make sense from a climate perspective, these embedded emissions must be offset by the reduction in greenhouse gases that is the result of traffic shifting from high-emitting modes to rail when the new link is opened.

This paper determines the amount of annual passenger trips and the magnitude of shift from other modes that are required for compensating for the embedded emissions from the construction of a reference high-speed rail project, when depreciated over the lifetime of the infrastructure. Since the expected lifetime of the components in the railway differ, the embedded emissions are calculated using a steady-state approach where all components are assumed to be continuously replaced and recycled at the end of their lifetime

The objective of the United Nations Framework Convention on Climate Change’s is to prevent greenhouse gases from exceeding a concentration in the atmosphere that would raise the global mean temperature by more than 2 °C above its pre-industrial level. As the atmosphere under current trends will approach this critical concentration of greenhouse gases within a few decades, the payback time for emissions caused in the near term by large projects must be sufficiently short to prevent them from contributing to an overdraft. We have therefore chosen to calculate the carbon annuity based on a 50-year analysis period starting in 2010. This affects the assumptions with regard to available technologies and energy use.

#### 5. Oil independence is impossible

NATIONAL PETROLEUM COUNCIL 07 Samuel W. Bodman - US Secretary of Energy, Lee Raymond, Andrew Gould, John Hamre, David O’Reilly, Daniel Yergin

(July 18, , Part of the 300-page “Hard Truths” study conducted by the US National Petroleum Council, http://downloadcenter.ConnectLive.com/events/npc071807/pdf-downloads/Final\_Report/NPC\_Facing\_Hard\_Truths.pdf)

U.S. and global energy security depend upon reliable, sufﬁcient energy supplies freely traded among nations. This dependence will rise with the growth required in international oil and natural gas trade, and may be increasingly inﬂuenced by political goals and tensions. These trends are prompting renewed concerns about U.S. energy security. These energy security concerns have spurred calls for the United States to become totally self-sufficient in energy supply, often referred to as “energy independence.” This concept is unrealistic in the foreseeable future and incompatible with broader foreign policy objectives and treaty obligations. Policies espousing “energy independence” may create considerable uncertainty among international trading partners and hinder investment in international energy supply development.9 It is a hard truth that energy independence is not necessary for energy security. Rather than pursuing energy independence, the United States should enhance its energy security by moderating demand, expanding and diversifying domestic energy supplies, and strengthening global energy trade and investment. Indeed, even if the United States could become physically self-sufﬁcient in energy, it could not disengage from global energy activity, trade, and ﬁnance. There can be no U.S. energy security without global energy security.

### Minimal Benefits

#### Environmental benefits are small

BUTTON 3 – 16 – 12 Professor – George Mason University School of Public Policy

[Kenneth Button, Is there any economic justification for high-speed railways in the United States?, 16 March 2012. Journal of Transport Geography, Volume 22, May 2012, Pages 300–302]

HSR has been supported by environmental arguments; a full train requires less fuel per passenger for a given distance than a car or plane. But most of the work has been very narrow, often not taking door-to-door effects into account or the environmental impacts of construction and land use changes. In addition, HSR is a spatially inflexible mode of transportation and if demand for its use is inadequate, its infrastructure leaves a large unused environmental footprint. Airports in contrast, involve little land take and services can easily be switched to other destinations. Taking these effects into account, even over the 400 km distances that HSR may provide a viable transportation service, its environmental benefits are at best, small.7 Additionally, the US freight rail network carries over 43%8 of the national tonne/miles done and, since 1980, its productivity has increased by over 172% and rates fallen by 55%. Some of the US HSR plans involve putting more passenger services onto this network that would inevitably result in some “intermodal” movements being switched to trucks with adverse environmental implications. While, one of the main arguments for HSR in Europe and Asia is to build dedicated track to separate passenger and freight traffic and free up capacity for the latter; this is not relevant in the US.

### Needs Riders

#### Only helps the environment if ridership increases

TODOROVICH, SCHNED, & LANE 11 1. director of America 2050, a national urban planning initiative, assistant visiting professor at the Pratt Institute Graduate Center for Planning and the Environment and a member of the Board of Advisors of the Eno Transportation Foundation, Masters in City and Regional Planning from the Bloustein School of Planning and Public Policy at Rutgers University 2. associate planner for America 2050 at Regional Plan Association part-time lecturer at the Edward J. Bloustein School of Planning and Public 3. senior fellow for urban design at Regional Plan Association and a founding principal of Plan & Process LLP. Loeb Fellow at the Harvard Graduate School of Design

[Petra Todorovich, Daniel Schned, and Robert Lane, High-Speed Rail: International Lessons for U.S. Policy Makers, September 2011, Lincoln Institute of Land Policy, Policy Focus Report]

E N V I R O N M E N T A L B E N E F I T S

High-speed rail has the potential to provide greater environmental beneﬁts and energy efﬁciencies than other modes of long distance travel. However, several conditions must be met to obtain these beneﬁts.

Energy efﬁciency and ridership: High-speed rail offers greater operating efﬁciency on a per passenger mile basis than competing modes, such as single-occupancy automobiles or airplanes that require signiﬁcant amounts of fuel to get off the ground. For example, Shinkansen trains are estimated to use one-quarter the energy of airplanes and one-sixth that of private automobiles per passenger mile (JR Central 2011a). To achieve environmental beneﬁts, highspeed trains must maximize load factors to realize the greatest efﬁciencies. As highspeed rail ridership increases, so does its relative energy efﬁciency, whereas a high-speed train carrying no passengers ceases to be efﬁcient in any sense.

In regions where the number of total trips is not growing, high-speed rail can bring about a net reduction of energy use through mode shift by capturing passengers from automobile or airplane trips. In regions like California where population and trips are projected to keep growing, highspeed rail can help reduce the energy and climate impacts on a per passenger basis through a combination of mode shift and attracting new passengers to high-speed rail.

### Land Use

#### Massive land use required

ZAIDI 07 BSc from the University of Calgary & J.D. from the University of Tulsa

[Kamaal R. Zaidi, ARTICLE: High Speed Rail Transit: Developing the Case for Alternative Transportation Schemes in the Context of Innovative and Sustainable Global Transportation Law and Policy, Temple Journal of Science, Technology & Environmental Law, Fall, 2007, 26 Temp. J. Sci. Tech. & Envtl. L. 301]

The most notable disadvantages of high-speed rail transit are its effects on communities, particularly the need for more land and the high construction costs of building new lines. n42 In building a new high-speed line, planners must negotiate around natural geographical barriers such as mountains, hard rocks, existing urban and rural communities, and other land. In order to create high-speed lines specialist engineers and technicians are required to participate in the construction and planning of high-speed train services. However, large parcels of land must often be purchased or set aside to build new, dedicated high-speed tracks. This is where active community participation and environmental assessments become critical, particularly in the initial planning stages of the high-speed project.

### A2 congestion

#### HSR doesn’t end traffic congestion – adds cars at problem locations

BUTTON 3 – 16 – 12 Professor – George Mason University School of Public Policy

[Kenneth Button, Is there any economic justification for high-speed railways in the United States?, 16 March 2012. Journal of Transport Geography, Volume 22, May 2012, Pages 300–302]

Much of the justification for HSR has involved looking at the mode from a wider social welfare function perspective with arguments revolving around non-market attributes, often involving second-best arguments concerning modal transfer from more congesting and environmentally intrusive modes (de Rus and Nombela, 2007). In terms of reducing road congestion, however, over most road systems that compete with planned HSR much travel is short distance and not between the origin and destination of the HSR service; speed requires non-stop services. HSR can add to local congestion at either end of a service because most people do not travel between city centers but make at least one specific urban trip to reach a HSR station. Put another way, most congestion in transportation systems is in the “last mile” – essentially on links on networks near the origins and destinations of trips, and focusing travel on major rail stations hardly mitigates this. In addition, there is little evidence of a high cross elasticity of demand between road and rail transportation, or between air travel and rail except in a few very particular, short haul cases (Oum et al., 2008). One reason for this is a lack of any major economies of scope in high-speedrail. It largely offers connected services, rather than networks of interconnected services with substantial amounts of on-line traffic. Its markets are thus, generally, quite limited.

### Ext 2 - tradeoff

#### Wont’ trade off with aviation – other countries have better rails already and its less than 10%

GAO 11 CONGRESSIONAL DIGEST - High-Speed Rail Overview System Components, Potential, and Cost Issues

[From the Library of Congress, Congressional Research Service, report High Speed Rail (HSR) in the United States, http://www.bafuture.org/sites/default/files/High%20Speed%20Rail%20%20in%20US%20CRS%2012.8.09.pdf]

The relative efficiency of HSR as a transportation investment varies among countries, as its level of usage is likely to depend on the interplay of many factors, including geography, economics, and government policies. For example, compared to the United States, countries with HSR have higher population densities, smaller land areas, lower per-capita levels of car ownership, higher gas prices, lower levels of car use (measured both by number of trips per day and average distance per trip), and higher levels of public transportation availability and use. Also, there is a significant difference in the structure of the rail industry in these countries compared to the United States. In virtually all of those countries, high-speed rail was implemented and is operated by state-owned rail companies that operate over a state-owned rail network, a network on which passenger rail service was far more prominent than freight service even before the introduction of high-speed rail. By contrast, in the United States the rail network is almost entirely privately owned, and freight service is far more prominent than is passenger service. Yet even with the introduction of HSR, and with other factors that are more conducive to intercity passenger rail use than in the United States, in most of these countries intercity rail travel (including both conventional and highspeed rail) represents less than 10 percent of all passenger miles traveled on land.

#### No Modal Transfer – fills up and replaces

BUTTON 3 – 16 – 12 Professor – George Mason University School of Public Policy

[Kenneth Button, Is there any economic justification for high-speed railways in the United States?, 16 March 2012. Journal of Transport Geography, Volume 22, May 2012, Pages 300–302]

Additionally, even when there are modal transfers to HSR, without constraints limiting new traffic on other transportation networks, these will simply fill up again: Down’s Law. An example is the impact of the HSR between London and Paris via the Channel Tunnel. There was considerable transfer of traffic from airlines to rail, but this only freed up slots and gates at Heathrow and other airports for longer distance flights using larger aircraft with the result, not only of more pressure for access to the HSR terminals in London and Paris but also for surface access to the airports.6

### Ext 3 – no impact

**Adaptation solves the impact**

S. Fred **Singer, 2001**, Prof Emeritus Enviro. Sciences – U. Virginia, July 2001 (<http://www.sepp.org/GWbooklet/GW.html>)

The recommended policy to meet any consequences of growing atmospheric greenhouse gases is to rely on human adaptation to any climate change, coupled with a "no-regrets policy" of energy conservation and increased energy efficiency. ("No-regrets" energy policies are those that make economic sense even if no climate change occurs.) Common sense is the key. Over-conservation can waste energy if it destroys energy-imbedded capital stock that requires new energy expenditures to replace. Adaptation has been the traditional method of meeting climate changes; it has worked over thousands of years for human populations that were not as technologically advanced nor as materially endowed as those at present. The resources saved by not restricting energy use through rationing or taxing can be applied to make human societies more resilient to climate change, whether manmade or natural. After all, any effects from climate change over the next century will be minor compared to societal changes brought about by new technology, rising incomes and population growth.

### Ext 4 – Turn – more C02

#### HSR construction creates massive emissions – offsets tradeoffs

CHANGA & KENDALLB 11 a Institute of Transportation Studies, University of California Davis b Department of Civil and Environmental Engineering, University of California Davis

[Brenda Changa, Alissa Kendallb, Transportation Research Part D: Transport and Environment, Volume 16, Issue 6, August 2011, Pages 429–434, Life cycle greenhouse gas assessment of infrastructure construction for California’s high-speed rail system]

This enormous public investment in HSR comes at the same time that California begins implementing greenhouse gas (GHG) reduction strategies to meet regulatory commitments for climate change mitigation. Both the California High-Speed Rail Authority (CHSRA) and the California Air Resources Board (CARB) (2008) estimate that the proposed HSR system will reduce GHG emissions by offsetting auto and air travel. CARB estimates the HSR system may reduce annual emissions by 1.15 million metric tons of CO2-equivalent (Mt CO2e). CHSRA is even more optimistic – proposing an estimated reduction of 3.08 Mt CO2e per year by 2030 (California High-Speed Rail Authority, 2008). However, not only do these emissions reduction estimates hinge on assumptions about ridership and the performance of the other passenger modes, neither considers the upfront emissions that would result from construction of HSR infrastructure.

This study estimates construction-related GHG emissions of the HSR trackbed and its supporting infrastructure through a process-based life cycle assessment (LCA). Construction of trackbed, electrification infrastructure, cut-and-fill operations, aerial structures, and tunnels are all characterized. This analysis is the first to ever characterize life cycle emissions from tunnel construction for any type of infrastructure, and may serve as a source of information and data for future LCAs. The result of the LCA allows for comparison of emissions from investment in HSR infrastructure to changes in passenger transportation emissions due to HSR operation.

Few studies have examined the potential impact of the HSR infrastructure development in the US. Chester and Horvath (2010) published the only study of the California HSR system that examines HSR construction and operation from a life cycle perspective. Their LCA characterized vehicle operation, vehicle non-operation, electricity production components, and infrastructure components, including construction, maintenance, and operation using a hybrid LCA approach. The hybrid LCA approach combines economic input–output methods and process-based methods. The construction components of their analysis include material and construction processes for aerial, cut-and-fill, and at-grade infrastructure segments and terrain-specific assessment for earthwork activities. Their study did not model tunneling processes or materials

Chester and Horvath provide estimates of life cycle GHG emissions for the California HSR system on a per passenger-kilometer traveled (PKT) basis, and report a range from well under 100 g CO2e/PKT to over 700 g CO2e/PKT depending on ridership levels. Chester and Horvath’s finding that ridership levels were critical in determining the extent to which the California HSR system would reduce – or potentially even increase – GHG emissions compared to air and auto travel modes highlights the uncertainty of HSR use-phase emissions reductions.

#### Early emissions outweigh traffic c02 benefits – need 10’s of millions of annual trips to offset

WESTINA & KAGESONA 12 a Centre for Transport Studies, Royal Institute of Technology b Department of Transport Science, Royal Institute of Technology. Both in Stockholm Sweden

[Jonas Westina, Per Kågesona, Can high speed rail offset its embedded emissions?, Transportation Research Part D: Transport and Environment, Volume 17, Issue 1, January 2012, Pages 1–7]

4. Annual traffic required for offsetting embedded emissions

Large CO2 emissions are generated from the construction and maintenance of a high speed link. In Network Rail (2009) the embedded greenhouse emissions from a high speed link are analyzed. Since the lifespan differs for different elements, the embedded emissions are annualized over the anticipated lifetime of each element. To calculate the embedded emissions there was also a need to consider the whole lifecycle including maintenance and the degree of material recycling when repairing the infrastructure. The embedded emissions are therefore expressed as CO2 equivalent emissions per rail-track km per year

An important factor for the size of the embedded emissions is the proportion of tunnels versus open sections. Network Rail (2009) assume that the embedded emissions, for open sections, varies between 140 and 230 tonnes CO2 eq. per rail-track km per year depending on the type of track and recycling rate. For tunnel sections the embedded emissions varies between 880 and 980 tonnes CO2 eq. per rail-track km per year. Other studies on the embedded emissions from railway infrastructure come to somewhat different results depending on what factors they include in the analysis and what assumptions they make regarding the design, geographical location and depreciation period of the project ( [Claro, 2010] and [International Union of Railways, 2009]). The overall magnitude of the embedded emissions is however the same

To study the overall effect on CO2 emissions from building a new high speed line, a reference project was used. The project is a 500 km long double track high speed line. Figures for the embedded emissions from the construction are taken from the central estimate in Network Rail (2009) with a recycling rate of 50% and assuming that 10% of the line is tunnels. The estimated annualized embedded emissions from constructing a 500 km long double track line is 118,000 tonnes of CO2-eq.

Using the reference project, the required number of trips needed to compensate for the embedded emissions could be calculated. The simulated distribution of the required number of trips is shown in Fig. 2.

The figure shows how many annual trips are needed to compensate for the embedded emissions from constructing and operating the new high-speed line, that is, when the emissions reduction, from the induced modal shift, is equal to the embedded emissions from constructing and operating the railway. When comparing the emissions reduction with the embedded emissions from constructing the new railway, the overall positive result in Fig. 1 changes. If the number of annual trips is below the required value, the reduced emissions from traffic diversion cannot compensate for the annualized embedded emissions from the construction. Even with a high diversion from aviation, on average nearly 10 million annual one-way trips are required to compensate for the annualized construction emissions – as indicated by the vertical line in the figure. For the other scenarios, the average number of required annual trips is even higher, between 15 and 20 million.

The reference project consists of a relatively low proportion of tunnels. For a railway with a higher proportion of tunnels, even more trips would be required to compensate for the annual embedded emissions of the construction of the project.

#### C02 only decreases if there isn’t an increase in total traffic

WESTINA & KAGESONA 12 a Centre for Transport Studies, Royal Institute of Technology b Department of Transport Science, Royal Institute of Technology. Both in Stockholm Sweden

[Jonas Westina, Per Kågesona, Can high speed rail offset its embedded emissions?, Transportation Research Part D: Transport and Environment, Volume 17, Issue 1, January 2012, Pages 1–7]

2.1.3. Traffic scenarios

In this analysis, the simulated emissions per passenger kilometer are applied to five different scenarios. Each scenario gives one example of how traffic generated by the investment in a new high speed line may be divided percentagewise on diverted traffic from other modes of transport, generated new traffic and pre-existing train passengers. Table 2 shows the assumptions made concerning how traffic is divided in the five scenarios.

From the figure it can be seen that on average all scenarios reduce total CO2 emissions. The effect is strongest with a high diversion from aviation. However, if the share of newly generated traffic is high, in combination with high emissions from marginal electricity production, there is a small risk that total CO2 emissions will increase instead of decrease. This highlights the importance of evaluating the share of newly generated traffic when estimating the environmental impact of investment in transport infrastructure. If the new line generates a large number of new trips, which would otherwise not take place, at least from a CO2 reduction perspective, the project may be unfavorable.

### Building creates more C02

#### Infrastructure building causes warming

CHANGA & KENDALLB 11 a Institute of Transportation Studies, University of California Davis b Department of Civil and Environmental Engineering, University of California Davis

[Brenda Changa, Alissa Kendallb, Transportation Research Part D: Transport and Environment, Volume 16, Issue 6, August 2011, Pages 429–434, Life cycle greenhouse gas assessment of infrastructure construction for California’s high-speed rail system]

4. Discussion

The contributions of material production, material transport and equipment for each infrastructure type are seen in Table 2. Production of construction materials contributes to more than 80% of emissions, transport of materials to the site approximately 16% of CO2e emissions and construction equipment operations only 5%. Construction of tunnels and aerial structure structures contributes nearly 60% of emissions, despite that these infrastructure types are only 15% of the infrastructure length. Sensitivity analysis shows that when aerial construction equipment emissions are varied from 0% to 100% of tunneling equipment emissions, GHG emissions change by only ±1.2%.

To put construction emissions in context, we compare the time required to avoid the equivalent mass of emissions based on avoided emissions during HSR system operation. This calculation assumes that the HSR system will reduce vehicle kilometers travelled by other modes (namely roads and airplanes) that are more GHG intensive on a PKT basis, leading to 1.15 Mt CO2e avoided per annum as estimated by CARB. The calculations reflect only the direct reduction in vehicle emissions, not the reduction in maintenance or averted expansion of infrastructure other modes would experience if they were used less. Based on these assumptions, a simple recuperation calculation (2.4 Mt CO2e/1.15 Mt CO2e) results in slightly more than two years after HSR operation begins. This simple calculation, however, may distort the time needed to offset the climate change effect of emissions from construction. Recent studies suggest that the climate change effect of emissions that occur at the outset of a system’s life cycle are underestimated in traditional carbon accounting and LCA methods (Kendall et al., 2009). To address this shortcoming, we can assess a recuperation time based on global warming effect, rather than the mass of GHG emissions as estimated by CO2e

For this recuperation time approach, global warming effect is modeled using cumulative radiative forcing (CRF). The IPCC uses CRF to calculate their widely applied global warming potentials and is an indicator of a GHG’s capacity to trap radiation over time. The recovery time calculated using CRF identifies the time when the global warming effect of the initial construction emissions are offset by the global warming effect of avoided use-phase emissions.

### Prefer short term decreases

#### Prefer short term emission decreases

WESTINA & KAGESONA 12 a Centre for Transport Studies, Royal Institute of Technology b Department of Transport Science, Royal Institute of Technology. Both in Stockholm Sweden

[Jonas Westina, Per Kågesona, Can high speed rail offset its embedded emissions?, Transportation Research Part D: Transport and Environment, Volume 17, Issue 1, January 2012, Pages 1–7]

A different type of partial coverage is the fact that part of the high speed rail infrastructure, in particular tunnels, may have a lifespan substantially longer than 50 years. Thus, limiting the analysis to a depreciation period of 50 years may be unfair. On the other hand, the benefits of emissions reductions in the distant future may turn out to be much less important than those that take place in the near future, as the world is getting closer and closer to the point where the accumulated concentration of greenhouse gases in the atmosphere will exceed the point where it leads to an increase of the mean average temperature of more than 2 °C.

## Solvency

### 1nc – Solvency

#### 1. Won’t get completed - Litigation will stop & drag out completion – California environmental suits prove

GROCHOW 12 J.D. Candidate, Chapman University School of Law, ; B.A. History, University of California, Irvine

[Kevin J. Grochow, COMMENT: California High-Speed Rail on Track? Bridging the Gap Between Competing Land Use Issues with the California High-Speed Rail Project, Chapman Law Review, Winter, 2012, 15 Chap. L. Rev. 585]

Conclusion

The United States is in a position to establish a high-speed rail network like those found in Europe and Asia, with the project in California taking the lead. However, one attempt to halt or slow down the project was successful with the challenge to the sufficiency of the EIR in the Town of Atherton case. Even after this initial litigation, which found the majority of the EIR sufficient under CEQA, and resulted in the Rail Authority revising those sections that were not, further litigation is certainly a possibility, with many of the same cities filing suit again on October 4, 2010. Unless allegations are brought that were not alleged in the Town of Atherton litigation, should this issue go to trial the reviewing court will likely look to the project description and land use analysis to ensure that they are now in compliance with CEQA, and will likely conclude that they are. Upon reaching this conclusion, the court should find the EIR for the entire Bay Area-to-Central Valley portion of the high-speed rail route sufficient and in compliance with CEQA.

However, there is still much work for the Rail Authority to accomplish on this project, much of which may be susceptible to further litigation. While the EIR examined here likely meets the standards set forth by CEQA, the Rail Authority still must complete EIRs for the other sections of the track, such as the Southern California-to-Central Valley portion. The completion of these EIRs will carry the same risk of inciting other municipalities and parties opposed to the project to challenge the EIRs on their procedural sufficiency under CEQA. While the environmental concerns expressed in these EIRs will likely be different between Southern and Northern California, using the August 2010 Final Program EIR for the Bay Area-to-Central Valley as a template or as a basis for the other sections of the route should dramatically reduce the risk of successful litigation against a future EIR. The Rail Authority has also learned a valuable lesson regarding the possible use of rights-of-way, and should prepare from the outset contingencies not reliant on existing rights-of-way and reflect that preparation in its future EIRs. The lack of such preparation was one of the largest contentions in Town of Atherton, and it ultimately proved costly for the Rail Authority. Even if this EIR, and all others subsequently completed for other portions of the route, are found sufficient under CEQA, parties opposed to the project may find other ways to slow down its progress, with the intention of ultimately stopping it. For example, air carriers whose business is reliant on short-to-medium length distance flights in regions that would be served [\*612] by a high-speed rail service may bring suit to prevent high-speed rail from encroaching on their market share, n169 albeit by making unrelated allegations. n170 However, making sure this, and all subsequent EIRs are sufficiently completed under CEQA is the first step to completing the planning process, and ultimately reaching the implementation of the California high-speed rail system.

#### 2. California solves now

GRZESKOWIAK 4 – 13 – 11 AC & CE Insight Staff

[California seeks federal boost for high-speed rail. By: Grzeskowiak, Jennifer, American City & County Exclusive Insight, 4/13/2011]

In early April, California applied to the U.S. Department of Transportation for the entire $2.4 billion that Florida returned in March to use for a proposed high-speed rail line from San Francisco to Los Angeles. In a letter accompanying the application, Gov. Edmund Brown referred to California as "the only state moving forward to fulfill President Obama's promise of trains traveling over 200 miles per hour [mph] to connect significant portions of our population."

Florida's discarded funds would allow the California High-Speed Rail Authority (CHSRA) to move forward with the "backbone" of its project, which would run from Merced to Bakersfield with trains reaching speeds of 220 mph, as well as extend the line either north or south. California aims to create a high-speed, long-distance line that would connect the state's major cities and be competitive with airfare, says Jeffrey Barker, deputy executive director for communications, policy and public outreach for CHSRA. "We don't want to make a mistake where we attempt to do high-speed rail, but it's only planned for 85 miles," Barker says. "We are approaching this with a long-term vision."

CHSRA is optimistic about securing at least a portion of the funding. "We got half of Wisconsin's and Ohio's returned funds, and that was when Florida was a competitor," Barker says. However, dozens of other states and Amtrak also are vying for the returned money. In April, U.S. Department of Transportation Secretary Ray LaHood declared the Northeast Corridor an official High-Speed Rail Corridor, allowing Amtrak to apply for the funding. The declaration came after lawmakers from states in the area appealed to LaHood for the change. On the April 4 deadline, Amtrak requested $1.3 billion, with the money designated for overhauls of current infrastructure and new construction.

With a $43 billion price tag for the San Francisco to Los Angeles segment, California's timeline for the project is heavily dependent on funding, Barker says. CHSRA so far has secured $5.5 billion in state and federal funds. It also has access to nearly $10 billion in general obligation bonds approved by voters in 2008, as long as the amount is matched by federal money. The state is continuing the project's environment review process and plans to begin construction next year.

Success in California could lead to more rail projects in the rest of the country, says John Robert Smith, president and CEO of Washington-based Reconnecting America. "You have Republican and Democratic mayors and governors seeing the wisdom of being involved in high-speed rail," Smith says. "As with the Interstate Highway System, it starts somewhere and creates the vision for how it can unfold in their own state."

#### 3. Long time to build – multiple delays

WOOD 2 – 8 – 11 CSM Staff Writer

[GOP critic calls Joe Biden's $53 billion high-speed rail plan 'insanity'. By: Wood, Daniel B., Christian Science Monitor, 08827729, 2/8/2011]

Big projects, big delays

But building high-speed rail is no easy process, says Leslie McCarthy, a high-speed rail expert at Villanova University's College of Engineering. "Whether or not a bill would or should pass is the easiest part of all this," she says. "The bigger part of the question is purchasing the land, getting right of ways, zoning issues, environmental impact assessments, laying dedicated tracks in a reasonable amount of time."

She says the typical US highway project can be held up anywhere from three to five years at the low end to 12 to 20 years at the high end. "Legislators and the public aren't aware of the number of federal, state, and local laws that agencies have to comply with that can't be gotten around," she adds.

In fact, the very thing that makes the Northeast so attractive for high-speed rail – its population density – could also make it the most difficult place to build. "There is so much population in the Northeast corridor that I don't know if there is even enough room for the dedicated tracks needed for high-speed rail," says Professor McCarthy. "And if the distances you are going are not sufficient to make efficient use of the high speeds, what's the point?"

### Ext 1 – Fails – can’t get land

#### Can’t get the land – NIMBY [not in my back yard]

ZHENHUA 11 PhD student at the George Mason University, School of Public Policy, and is currently working as a graduate research assistant under the supervision of Prof. Jonathan Gifford in the area of transportation policy [Zhenhua Chen, Transportation Law Journal, Article: Is the Policy Window Open for High-Speed Rail in the United States: A Perspectives from the Multiple Streams Model of Policymaking, Summer, 2011, 38 Transp. L. J. 115]

The key to make HSR successful is to establish a dedicated right-of-way so that running at a true high speed can be guaranteed to attract more riders. Unlike other countries, over sixty percent of the land in the United States is privately owned and the government has a very difficult [\*138] time obtaining land for public usage. n143 Because of the high cost of land, as well as constraints from 'Not in My Backyard ("NIMBY")', the cost of HSR turns out to be extremely high. n144 This is why the Acela Express, which runs between two of the most densely populated areas, still cannot achieve a true high speed of over 120 mph on average. n145 It simply doesn't have a dedicated right-of-way, and it even has to run on a shared track with freight trains in some parts of NEC corridor. n146 Building another dedicated right-of-way will face lots of constraints from NIMBY persons. n147 Choosing Florida I-4 rather than other planned national HSR corridors as a starting point is smart because the proposed Tampa-Orlando HSR line will be constructed on the land beside I-4 which is owned by the federal government, so land-acquisition costs are minimal. n148 Also, because the land is almost flat in the I-4 corridor, the cost to build a HSR route will not be too high compared with other corridors. n149 Such a low construction cost is likely to face less opposition both from legislators and the public, and thus, allow the Florida HSR plan to become a reality much faster. If the state and federal financing hold, the first phase of the railway is scheduled to be completed by 2015. n150

### Ext 1 - Fails – need an administration

#### Absent an additional Administration – federal action won’t help

ROGERS 11 J.D., University of Illinois College of Law, 2011; B.A., Economics, University of Utah

[Joshua Rogers, NOTE: THE GREAT TRAIN ROBBERY: HOW STATUTORY CONSTRUCTION MAY HAVE DERAILED AN AMERICAN HIGH SPEED RAIL SYSTEM, University of Illinois Journal of Law, Technology & Policy, Spring, 2011]

A. Establishment of a Federal High Speed Rail Administration Separate from the Federal Railroad Administration

Admittedly, creation of a federal high speed rail administration will not directly correct the problems for American high speed rail already created by ARRA. However, the establishment of such an administration may prove to be the most important Congressional action for the development of a high speed rail network. A federal administration on par with the federal highway administration and federal aviation administration would commit America to a future that includes high speed rail. The natural order of our bureaucratic system dictates that a federal high speed rail administration would receive annual funding, develop expertise in the field upon which Congress can be advised, and ensure a dedicated group of public servants that have their self-preservation incentives tied to the mission of high speed rail.

One might think that there is no need for a federal high speed rail administration, because the federal railroad administration can continue to manage the development of high speed rail. This belief simply ignores the demonstrated inability of the federal railroad administration to competently manage high speed rail development n142 and the disparate goals of traditional [\*233] rail transport (passenger and freight) and high speed rail. As mentioned above, high speed rail requires dedicated rail lines for it to achieve its potential. n143

The creation of a federal high speed rail administration, however, does not mean that high speed rail development returns to square one. Much like how the federal highway administration absorbed the commerce department's bureau of public roads, n144 a federal high speed rail administration could absorb departments from the federal railroad administration and other agencies to prevent the loss of valuable expertise.

Thus, a distinct administration within the department of transportation, dedicated solely to high speed rail development, would solidify the future of high speed rail in America in a way unattainable by other manners.

### Ext 3 - Long Time & Billions

#### Billions of dollars for each state rail – and takes decades to complete

WOOD 11 – 2 – 11 CSM Staff Writer

[Can Obama's high-speed rail plans survive California sticker shock? By: Wood, Daniel B., Christian Science Monitor, 08827729, 11/2/2011]

In what transportation experts say could be a cautionary tale for the rest of the country, the estimates for the cost and finish date of California's signature high-speed rail project have been dramatically altered.

The new cost estimate, formally released Tuesday by the California High Speed Rail Authority, is $98.5 billion, more than twice the previous estimate of $43 billion. The finish date is 2034, 14 years later than first predicted.

California voters approved a $10 billion bond in 2008 in support of plans to build a high-speed rail corridor to link northern and southern California, with trains reaching 220 m.p.h. The system would link to other rail lines that fanned out across the state.

Supporters of the project say this new estimate gives the state planning certainty. But critics are aghast. State Sen. Doug LaMalfa (R) announced plans to introduce legislation asking state voters to reconsider the bond measure they already approved.

"The voters were deceived in the original go-around with highly optimistic ridership and cost numbers that have not been borne out," Senator LaMalfa told The Sacramento Bee, saying the larger figures "should have been in front of voters to begin with, so they would have the truth."

Officials are rolling out other details of the plan to soften the blow, touting the connections to existing Metrolink rails in large cities, for example. They are also trying to be frank -- and more conservative -- about ridership estimates that critics say are way too high.

"This plan represents a new day, a new train, a new beginning for the California High Speed Rail Authority and for our system," said Tom Umberg, chairman of the authority board, in a statement.

Some analysts say the turn of events is a welcome bit of honesty, given that massive public-project costs generally balloon beyond expectations.

"The story is both shocking and unsurprising at the same time. It's shocking because of the sheer size of the price tag," says Jack Pitney, a political scientist at Claremont McKenna College. "It's unsurprising because big projects often cost far more than the initial estimates."

The episode could have an impact on plans for other rail projects nationwide. In February, Vice President Joe Biden announced a plan to put $53 billion in federal funds into a national, high-speed rail network, which could be built in regional sections.

But such projects are often more difficult than they seem at first, and California might have bitten off "way too much," says Steve Schlickman, executive director of University of Illinois at Chicago's Urban Transportation Center.

"That is based on my personal project experience," he says. "They should have taken a more incremental approach, like the Midwest, which is starting with higher speed of 110 m.p.h."

Mr. Pitney says political opposition is likely to grow, especially in California's current fiscal climate. "At a time when government at all levels has to cut back, many voters will wonder why California is spending so much on a system that so few of them will ever ride," he says.

### A2 Maglev trains

#### Maglev won’t get built – too expensive, not enough of a benefit

GAO 11 CONGRESSIONAL DIGEST - High-Speed Rail Overview System Components, Potential, and Cost Issues

[From the Library of Congress, Congressional Research Service, report High Speed Rail (HSR) in the United States, http://www.bafuture.org/sites/default/files/High%20Speed%20Rail%20%20in%20US%20CRS%2012.8.09.pdf]

People have talked about the potential of maglev trains for decades, but maglev projects face a number of obstacles. One is that maglev lines are not compatible with conventional train technology, so a maglev line cannot be added as part of an existing rail network. Also, although the costs of constructing and maintaining a maglev line are not clear, as very few maglev projects have ever been built, it is generally believed that such projects are very expensive. Japan and Germany have both had maglev test tracks in operation since the 1970s and 1980s, respectively, but neither country has gone on to build the commercial maglev lines that were envisioned.

Congress established a program to promote the development of maglev lines in the United States in the 1990s, but none of the projects that received support from the program have advanced beyond the planning stage. As of late 2009, there was only one commercial maglev system in operation in the world, a 19-mile line completed in 2004 in China, connecting an outlying station on Shanghai’s subway network to the Pudong International Airport. That train, based on German maglev technology, reaches 268 mph in normal operation, though it has a demonstrated top speed of 311 mph.

Since conventional train technology is capable of speeds comparable to maglev technology, and the costs of maglev implementation are uncertain, but probably very high, there is little impetus to adopt maglev technology. Moreover, as a different type of rail technology, maglev would not connect to the existing rail network, but would involve creating an entirely separate rail network. China reportedly built the Shanghai line in part to examine maglev technology as a candidate for high-speed lines it planned; it subsequently decided to use conventional train technology for its high-speed rail network.

### Ridership key

#### Need over 6 million riders annually to make money

GAO 11 CONGRESSIONAL DIGEST - High-Speed Rail Overview System Components, Potential, and Cost Issues

[From the Library of Congress, Congressional Research Service, report High Speed Rail (HSR) in the United States, http://www.bafuture.org/sites/default/files/High%20Speed%20Rail%20%20in%20US%20CRS%2012.8.09.pdf]

■ Ridership Potential

Given the high cost of constructing and operating highspeed rail service, its cost-effectiveness depends on achieving high ridership levels. The ridership levels needed to make a high-speed rail system viable vary according to the cost of the system; a high-speed route with a dedicated track and electric power supporting speeds in excess of 150 mph will be much more expensive than upgrading existing track to support 110 mph service. Estimates of the level of ridership needed to justify the cost of high-speed systems similar to those in other countries range from 6 million to 9 million riders in the first year. To put that figure in context, Amtrak’s current high-speed service, the Acela, which began operating in 2000 in the most densely populated corridor in the United States, carried 3.4 million passengers in 2008.

#### Ridership key to any benefit

ROGERS 11 J.D., University of Illinois College of Law, 2011; B.A., Economics, University of Utah

[Joshua Rogers, NOTE: THE GREAT TRAIN ROBBERY: HOW STATUTORY CONSTRUCTION MAY HAVE DERAILED AN AMERICAN HIGH SPEED RAIL SYSTEM, University of Illinois Journal of Law, Technology & Policy, Spring, 2011]

A. How Would America Benefit From High Speed Rail?

Just as it is impossible to know exactly what factors are fueling the interest in American high speed rail, it is also impossible to predict every possible benefit that high speed rail will bring with it. In fact, the debate is still raging whether or not high speed rail will create a net benefit for the U.S. at all. n50 Nonetheless, there is still an underlying rule by which all benefit must be derived: America can only benefit from high speed rail, if enough people actually ride on the new system.

Every debate about the reward from, or viability of, high speed rail centers around the same question: will enough people choose to ride high speed rail when other forms of transportation are available? Responses to the threshold ridership question vary drastically even among reasonable individuals, who are both intelligent and knowledgeable in the subject matter. Some have supported their answers with statistical analysis, n51 while others analogize high speed rail to historical precedents. n52 This Note will not presume to answer the question of ridership levels, when so many thoughtful articles and reports already address the subject thoroughly. Instead, the Note presumes sustainable ridership levels, in order to evaluate the benefits that a viable U.S. high speed rail system would create. n53

## Spending Disad

### HSR expensive

#### HSR is expensive – minimum 400 billion.

ROGERS 11 J.D., University of Illinois College of Law, 2011; B.A., Economics, University of Utah

[Joshua Rogers, NOTE: THE GREAT TRAIN ROBBERY: HOW STATUTORY CONSTRUCTION MAY HAVE DERAILED AN AMERICAN HIGH SPEED RAIL SYSTEM, University of Illinois Journal of Law, Technology & Policy, Spring, 2011]

3. How Much Financial Investment Will U.S. HSR Require?

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

Not surprisingly, estimates of the cost of high speed rail infrastructure construction vary widely. n104 Some estimate the total cost of developing high speed rail in the east and the west coast will be approximately $ 800 billion based on the cost of Spain's high speed rail system. n105 Under that same comparison, a comprehensive U.S. system would cost approximately $ 1.5 trillion. n106 Another estimate has the California corridor alone costing $ 33 to $ 37 billion. n107 That route comprises 8% of the track miles anticipated for a corridor system, n108 so a rough estimate would place the entire corridor system cost at $ 370-$ 460 billion.

Another simple estimate can be calculated by multiplying the route length by cost per track mile. Dedicated lines (for enhanced steel wheel or tilting train systems) cost between $ 30-$ 50 million per mile to construct. n109 When multiplied by the 8,439 mile length of the proposed corridor system, n110 the dedicated lines of a corridor system would cost approximately $ 253-$ 422 billion to construct. And, that estimate does not include the costs of either articulated trainsets, which run $ 40 to 50 million each or new high speed rail stations. n111

Given the above analysis, it is safe to say that a U.S. high speed rail network of heavy traffic corridors would cost anywhere from $ 400-$ 800 billion. [\*228]

### Expensive – better alternatives

#### Expensive – better alternatives

DORSETT 10 CNN Reporter

[Katherine Dorsett, Is the U.S. turning a corner on high-speed rail?, CNN, <http://www.cnn.com/2010/TRAVEL/08/18/us.high.speed.rail/index.html>]

Despite these promises from the government, high-speed rail comes with its share of opponents, who say it is too expensive and won't save energy. Some even question if it will ever be built.

"Even in a strong economy, building high-speed rail makes little sense, offering minimal reductions in travel times at exorbitant costs," said Ronald Utt, who is the Herbert and Joyce Morgan senior research fellow for the Thomas A. Roe Institute for Economic Policy Studies at the Heritage Foundation.

"For instance, one has to wonder what exactly motivated the review team to endorse the proposed $1.1 billion investment in the Kansas City-St. Louis-Chicago route, which would allow customers to reach their destinations 10 percent faster than they could by driving between Chicago and St. Louis," said Utt.

Utt said the $1.25 billion federal investment in a $3.2 billion project to build a high-speed rail line between Orlando and Tampa would reduce travel time between the two cities to less than one hour, compared to about 90 minutes by car. He said other projects have similar travel time differences.

Randal O'Toole, a senior fellow with the CATO Institute, said it is far more cost-effective to save energy by encouraging people to drive more fuel-efficient cars than to build and operate high-speed rail.

"Moreover, in places that do generate electricity from renewable sources, it would be more cost-effective to use that electricity to power electric or plug-in hybrid cars than high-speed rail," O'Toole said. "A Department of Energy report adds that boosting train speeds to 110 mph will reduce the energy efficiency of the trains, making them less energy efficient than automobiles."

A report from the United States Government Accountability Office also highlights potential issues with high-speed rail plans in the United States.

"Passenger rail service, especially services at higher and high speeds, will require new safety rules, constant public capital investment and operating subsidies, and balance with freight rail service and the rest of the national transportation system -- and currently only some of these elements are in place," according to a GAO report.

While the recent federal funds may serve as a catalyst for many projects and have generated high public expectations, the planning necessary to meet the many concerns outlined above has not yet occurred, the GAO report said.

"Given the funding, I would say that it is fairly likely that at least a few moderate-speed rail projects will eventually be completed," said O'Toole. "But the California high-speed rail project remains fairly unlikely considering that more than three-fourths of its costs are not yet funded. Florida probably has a 50-50 chance of completion since about half its costs are funded."

### A2 profitable

#### HSR won’t be profitable – government doesn’t factor

WOOD 11 – 2 – 11 CSM Staff Writer

[Can Obama's high-speed rail plans survive California sticker shock? By: Wood, Daniel B., Christian Science Monitor, 08827729, 11/2/2011]

But the bad economy could also be a selling point. California has the second-highest unemployment rate in the nation. Studies show that for every $1 billion spent on infrastructure remediation creates between 18,000 and 34,000 jobs, says Barry LePatner, author of "Too Big to Fail: America's Failing Infrastructure and the Way Forward."

Others, however, see this as evidence of what happens when government tries to trump the private sector.

"The idea for this was generated out of Washington in an attempt to stimulate the economy," says Peter Zaleski, an economics professor at the Villanova School of Business. "In the free marketplace, producers try to earn a profit by efficiently producing something that customers will value. Rarely are such calculations performed when the decisions are made by government administrators and elected officials."

### Price Under-estimated

#### Infrastructure Investment is always underestimated – assume it will cost tons more and will mislead

FLYVBJERG, HOLM, & BUHL 02 a. professor of planning with the Department of Development and Planning, Aalborg University, Denmark. founder and director of the university’s research program on transportation infrastructure planning and was twice a Visiting Fulbright Scholar to the U.S. b. assistant professor of planning with the Department of Development and Planning, Aalborg University. C. associate professor with the Department of Mathematics, Aalborg University, and an associate statistician with the university’s research program on transportation infrastructure planning

[Bent Flyvbjerg, Mette Skamris Holm & Soren Buhl, “Underestimating Costs in Public Works Projects: Error or Lie?,” Journal of the American Planning Association, Summer 2002 u Vol. 68, No. 3]

Summary and Conclusions

The main findings from the study reported in this article—all highly significant and most likely conservative— are as follows:

• In 9 out of 10 transportation infrastructure projects, costs are underestimated. • For rail projects, actual costs are on average 45% higher than estimated costs (sd=38). • For fixed-link projects (tunnels and bridges), actual costs are on average 34% higher than estimated costs (sd=62). • For road projects, actual costs are on average 20% higher than estimated costs (sd=30). • For all project types, actual costs are on average 28% higher than estimated costs (sd=39). • Cost underestimation exists across 20 nations and 5 continents; it appears to be a global phenomenon. • Cost underestimation appears to be more pronounced in developing nations than in North America and Europe (data for rail projects only). • Cost underestimation has not decreased over the past 70 years. No learning that would improve cost estimate accuracy seems to take place. • Cost underestimation cannot be explained by error and seems to be best explained by strategic misrepresentation, i.e., lying. • Transportation infrastructure projects do not appear to be more prone to cost underestimation than are other types of large projects.

We conclude that the cost estimates used in public debates, media coverage, and decision making for transportation infrastructure development are highly, systematically, and significantly deceptive. So are the costbenefit analyses into which cost estimates are routinely fed to calculate the viability and ranking of projects. The misrepresentation of costs is likely to lead to the misallocation of scarce resources, which, in turn, will produce losers among those financing and using infrastructure, be they taxpayers or private investors.

We emphasize that these conclusions should not be interpreted as an attack on public (vs. private) spending on infrastructure, since the data are insufficient to decide whether private projects perform better or worse than public ones regarding cost underestimation. Nor do the conclusions warrant an attack on spending on transportation vs. spending on other projects, since other projects appear to be as liable to cost underestimation and escalation as are transportation projects. With transportation projects as an in-depth case study, the conclusions simply establish that significant cost underestimation is a widespread practice in project development and implementation, and that this practice forms a substantial barrier to the effective allocation of scarce resources for building important infrastructure.

The key policy implication for this consequential and highly expensive field of public policy is that those legislators, administrators, bankers, media representatives, and members of the public who value honest numbers should not trust the cost estimates presented by infrastructure promoters and forecasters. Another important implication is that institutional checks and balances— including financial, professional, or even criminal penalties for consistent or foreseeable estimation errors—should be developed to ensure the production of less deceptive cost estimates. The work of designing such checks and balances has been begun elsewhere, with a focus on four basic instruments of accountability: (1) increased transparency, (2) the use of performance specifications, (3) explicit formulation of the regulatory regimes that apply to project development and implementation, and (4) the involvement of private risk capital, even in public projects (Bruzelius et al., 1998; Flyvbjerg et al., in press).

#### Rail infrastructure projects are far more expensive than estimated – assume it’ll cost more

FLYVBJERG, HOLM, & BUHL 02 a. professor of planning with the Department of Development and Planning, Aalborg University, Denmark. founder and director of the university’s research program on transportation infrastructure planning and was twice a Visiting Fulbright Scholar to the U.S. b. assistant professor of planning with the Department of Development and Planning, Aalborg University. C. associate professor with the Department of Mathematics, Aalborg University, and an associate statistician with the university’s research program on transportation infrastructure planning

[Bent Flyvbjerg, Mette Skamris Holm & Soren Buhl, “Underestimating Costs in Public Works Projects: Error or Lie?,” Journal of the American Planning Association, Summer 2002 u Vol. 68, No. 3]

Based on the available evidence, we conclude that rail promoters appear to be particularly prone to cost underestimation, followed by promoters of fixed-link projects. Promoters of road projects appear to be relatively less inclined to underestimate costs, although actual costs are higher than estimated costs much more often than not for road projects as well. Further subdivisions of the sample indicate that high-speed rail tops the list of cost underestimation, followed by urban and conventional rail, in that order. Similarly, cost underestimation appears to be larger for tunnels than for bridges. These results suggest that the complexities of technology and geology might have an effect on cost underestimation. These results are not statistically significant, however. Even if the sample is the largest of its kind, it is too small to allow repeated subdivisions and still produce significant results. This problem can be solved only by further data collection from more projects.

We conclude that the question of whether there are significant differences in the practice of cost underestimation among rail, fixed-link, and road projects must be answered in the affirmative. The average difference between actual and estimated costs for rail projects is substantially and significantly higher than that for roads, with fixed-link projects in a statistically nonsignificant middle position. The average inaccuracy for rail projects is more than twice that for roads, resulting in average cost escalations for rail more than double that for roads. For all three project types, the evidence shows that it is sound advice for policy and decision makers as well as investors, bankers, media, and the public to take any estimate of construction costs with a grain of salt, especially for rail and fixed-link projects.

#### Infrastructure projects are likely to be grossly under-estimated in cost

FLYVBJERG, HOLM, & BUHL 02 a. professor of planning with the Department of Development and Planning, Aalborg University, Denmark. founder and director of the university’s research program on transportation infrastructure planning and was twice a Visiting Fulbright Scholar to the U.S. b. assistant professor of planning with the Department of Development and Planning, Aalborg University. C. associate professor with the Department of Mathematics, Aalborg University, and an associate statistician with the university’s research program on transportation infrastructure planning

[Bent Flyvbjerg, Mette Skamris Holm & Soren Buhl, “Underestimating Costs in Public Works Projects: Error or Lie?,” Journal of the American Planning Association, Summer 2002 u Vol. 68, No. 3]

Inaccuracy of Cost Estimates

Figure 1 shows a histogram with the distribution of inaccuracies of cost estimates. If errors in estimating costs were small, the histogram would be narrowly concentrated around zero. If errors in overestimating costs were of the same size and frequency as errors in underestimating costs, the histogram would be symmetrically distributed around zero. Neither is the case. We make the following observations regarding the distribution of inaccuracies of construction cost estimates:

• Costs are underestimated in almost 9 out of 10 projects. For a randomly selected project, the likelihood of actual costs being larger than estimated costs is 86%. The likelihood of actual costs being lower than or equal to estimated costs is 14%.

• Actual costs are on average 28% higher than estimated costs (sd=39).

• We reject with overwhelming significance the thesis that the error of overestimating costs is as common as the error of underestimating costs (p<0.001; two-sided test, using the binomial distribution). Estimated costs are biased, and the bias is caused by systematic underestimation.

• We reject with overwhelming significance the thesis that the numerical size of the error of underestimating costs is the same as the numerical size of the error of overestimating costs (p<0.001; nonparametric Mann-Whitney test). Costs are not only underestimated much more often than they are overestimated or correct, costs that have been underestimated are also wrong by a substantially larger margin than costs that have been overestimated.

We conclude that the error of underestimating costs is significantly much more common and much larger than the error of overestimating costs. Underestimation of costs at the time of decision to build is the rule rather than the exception for transportation infrastructure projects. Frequent and substantial cost escalation is the result.

#### Cost is underestimated – empirically tested & true

FLYVBJERG, HOLM, & BUHL 02 a. professor of planning with the Department of Development and Planning, Aalborg University, Denmark. founder and director of the university’s research program on transportation infrastructure planning and was twice a Visiting Fulbright Scholar to the U.S. b. assistant professor of planning with the Department of Development and Planning, Aalborg University. C. associate professor with the Department of Mathematics, Aalborg University, and an associate statistician with the university’s research program on transportation infrastructure planning

[Bent Flyvbjerg, Mette Skamris Holm & Soren Buhl, “Underestimating Costs in Public Works Projects: Error or Lie?,” Journal of the American Planning Association, Summer 2002 u Vol. 68, No. 3]

Four Steps to Understanding Deceptive Cost Estimation

We see four steps in the evolution of a body of scholarly research aimed at understanding practices of cost underestimation and deception in decision making for transportation infrastructure. The first step was taken by Pickrell (1990) and Fouracre, Allport, and Thomson (1990), who provided sound evidence for a small number of urban rail projects that substantial cost underestimation is a problem, and who implied that such underestimation may be caused by deception on the part of project promoters and forecasters. The second step was taken by Wachs (1990), who established—again for a small sample of urban rail projects—that lying, understood as intentional deception, is, in fact, an important cause of cost underestimation. Wachs began the difficult task of charting who does the lying, why it occurs, what the ethical implications are, etc.

The problem with the research in the first two steps is that it is based on too few cases to be statistically significant; the pattern found may be due to random properties of the small samples involved. This problem is solved in the third step, taken with the work reported in this article. Based on a large sample of transportation infrastructure projects, we show that (1) the pattern of cost underestimation uncovered by Pickrell and others is of general import and is statistically significant, and (2) the pattern holds for different project types, different geographical regions, and different historical periods. We also show that the large-sample pattern of cost underestimation uncovered by us lends statistical support to the conclusions about lying and cost underestimation arrived at by Wachs for his small sample.

The fourth and final step in understanding cost underestimation and deception would be to do for a large sample of different transportation infrastructure projects what Wachs did for his small sample of urban rail projects: establish whether systematic deception actually takes place, who does the deception, why it occurs, etc. This may be done by having a large number of forecasters and project promoters, representing a large number of projects, directly express, in interviews or surveys, their intentions with and reasons for underestimating costs. This is a key topic for further research. In sum, then, we do not claim with this article to have provided final proof that lying is the main cause of cost underestimation in transportation infrastructure projects. We claim, however, to have taken one significant step in a cumulative research process for testing whether this is the case by establishing the best and largest set of data about cost underestimation in transportation infrastructure planning so far seen, by carrying out the first statistically significant study of the issues involved, and by establishing that our data support and give statistical significance to theses about lying developed in other research for smaller, statistically nonsignificant samples.

As part of further developing our understanding of cost underestimation, it would also be interesting to study the differences between projects that are approved on a competitive basis, by voters at an election, and those that are funded through formula-based allocations. One may speculate that there is an obvious incentive to make a project look better, and hence to underestimate costs, in the campaign leading up to an election. A good singlecase study of this is Kain’s (1990) article about a rail transit project in Dallas. Votes are cast more often for large rail, bridge, and tunnel projects than for road projects. For example, most U.S. highway funds are distributed to states based on a formula (i.e., there is no competitive process). A state department of transportation (DOT) is likely to have a fixed annual budget for construction. The DOT leadership would presumably want fairly accurate cost estimates before allocating the budget. One may speculate that large cost underestimation is less likely in this situation. There are exceptions to this scenario. Sometimes DOT officials want to persuade state legislators to increase their budget. And states occasionally submit bond issue proposals to voters. In Europe, the situation is similar on important points, although differences also exist. This may explain the result found below, that cost underestimation is substantially lower for roads than for rail, bridges, and tunnels, and that this is the case both in the U.S. and Europe. Needless to say, more research is necessary to substantiate this observation.

### A2 getting better at projections

#### They aren’t improving – under-estimation is likely intentional

FLYVBJERG, HOLM, & BUHL 02 a. professor of planning with the Department of Development and Planning, Aalborg University, Denmark. founder and director of the university’s research program on transportation infrastructure planning and was twice a Visiting Fulbright Scholar to the U.S. b. assistant professor of planning with the Department of Development and Planning, Aalborg University. C. associate professor with the Department of Mathematics, Aalborg University, and an associate statistician with the university’s research program on transportation infrastructure planning

[Bent Flyvbjerg, Mette Skamris Holm & Soren Buhl, “Underestimating Costs in Public Works Projects: Error or Lie?,” Journal of the American Planning Association, Summer 2002 u Vol. 68, No. 3]

Have Estimates Improved Over Time?

In the previous two sections, we saw how cost underestimation varies with project type and geography. In this section, we conclude the statistical analyses by studying how underestimation has varied over time. We ask and answer the question of whether project promoters and forecasters have become more or less inclined over time to underestimate the costs of transportation infrastructure projects. If underestimation were unintentional and related to lack of experience or faulty methods in estimating and forecasting costs, then, a priori, we would expect underestimation to decrease over time as better methods were developed and more experience gained through the planning and implementation of more infrastructure projects.

Figure 3 shows a plot of the differences between actual and estimated costs against year of decision to build for the 111 projects in the sample for which these data are available. The diagram does not seem to indicate an effect from time on cost underestimation. Statistical analyses corroborate this impression. The null hypothesis that year of decision has no effect on the difference between actual and estimated costs cannot be rejected (p=0.22, F-test). A test using year of completion instead of year of decision (with data for 246 projects) gives a similar result (p=0.28, F-test).

We therefore conclude that cost underestimation has not decreased over time. Underestimation today is in the same order of magnitude as it was 10, 30, and 70 years ago. If techniques and skills for estimating and forecasting costs of transportation infrastructure projects have improved over time, this does not show in the data. No learning seems to take place in this important and highly costly sector of public and private decision making. This seems strange and invites speculation that the persistent existence over time, location, and project type of significant and widespread cost underestimation is a sign that an equilibrium has been reached: Strong incentives and weak disincentives for underestimation may have taught project promoters what there is to learn, namely, that cost underestimation pays off. If this is the case, underestimation must be expected and it must be expected to be intentional. We examine such speculation below. Before doing so, we compare cost underestimation in transportation projects with that in other projects.

### A2 Flyvberg isn’t about the US

#### Applies to North American projects

FLYVBJERG, HOLM, & BUHL 02 a. professor of planning with the Department of Development and Planning, Aalborg University, Denmark. founder and director of the university’s research program on transportation infrastructure planning and was twice a Visiting Fulbright Scholar to the U.S. b. assistant professor of planning with the Department of Development and Planning, Aalborg University. C. associate professor with the Department of Mathematics, Aalborg University, and an associate statistician with the university’s research program on transportation infrastructure planning

[Bent Flyvbjerg, Mette Skamris Holm & Soren Buhl, “Underestimating Costs in Public Works Projects: Error or Lie?,” Journal of the American Planning Association, Summer 2002 u Vol. 68, No. 3]

Cost Underestimation by Geographical Location

In addition to testing whether cost underestimation differs for different kinds of projects, we also tested whether it varies with geographical location among Europe, North America, and “other geographical areas” (a group of 10 developing nations plus Japan). Table 2 shows the differences between actual and estimated costs in these three areas for rail, fixed-link, and road projects. There is no indication of statistical interaction between geographical area and type of project. We therefore consider the effects from these variables on cost underestimation separately. For all projects, we find that the difference between geographical areas in terms of underestimation is highly significant (p<0.001). Geography matters to cost underestimation. If Europe and North America are compared separately, which is compulsory for fixed links and roads because no observations exist for these projects in other geographical areas, comparisons can be made by t-tests (as the standard deviations are rather different, the Welch version is used). For fixed-link projects, the average difference between actual and estimated costs is 43.4% in Europe versus 25.7% North America, but the difference between the two geographical areas is nonsignificant (p=0.414). Given the limited number of observations and the large standard deviations for fixed-link projects, we would need to enlarge the sample with more fixed-link projects in Europe and North America in order to test whether the differences might be significant for more observations. For rail projects, the average difference between actual and estimated costs is 34.2% in Europe versus 40.8% in North America. For road projects, the similar numbers are 22.4% versus 8.4%. Again, the differences between geographical areas are nonsignificant (p=0.510 and p=0.184, respectively).

We conclude, accordingly, that the highly significant differences we found above for geographical location come from projects in the “other geographical areas” category. The average difference between actual and estimated costs in this category is a hefty 64.6%.

## Politics

### HSR Costs Capital

#### HSR costs capital – long term benefits aren’t considered

ZHENHUA 11 PhD student at the George Mason University, School of Public Policy, and is currently working as a graduate research assistant under the supervision of Prof. Jonathan Gifford in the area of transportation policy [Zhenhua Chen, Transportation Law Journal, Article: Is the Policy Window Open for High-Speed Rail in the United States: A Perspectives from the Multiple Streams Model of Policymaking, Summer, 2011, 38 Transp. L. J. 115]

One common objective for these HSR policy proposals is to build an efficient HSR system in the United States. However, neither lawmakers nor the President have personal experience with HSR. n67 Therefore, when the idea of HSR is addressed, reactions from both Congress and the White House are very cautious. n68 Under such a scenario, for HSR to be accepted, policymakers must be persuaded that HSR can benefit the nation. It seems that the long-term benefits, such as congestion alleviation and energy consumption reduction, are too far off in the future to see any practical immediate effects. n69 Consequently, those tangible advantages that can be seen in a short term are preferred by policy communities in order to prove its feasibility.

#### HSR will cost massive capital and spending – critics are impassioned

CONGRESSIONAL DIGEST 11

High-Speed Rail Investing in a New National Transportation Infrastructure, www.congressionaldigestdebates.com

Although Congress has debated the feasibility of highspeed rail off and on since the 1960s, enthusiasm usually faded in the face of such obstacles as cost and competition with other transportation priorities. It returned in February 2009, however, with the provision of $8 billion for intercity passenger rail and high-speed rail projects in the American Recovery and Reinvestment Act, followed by an Obama Administration proposal announced last month to invest $53 billion in high-speed rail over the next six years. State governments, rail advocates, and environmentalists responded positively, and the “Buy America” requirement in the Administration’s proposal drew commitments from foreign as well as domestic rail manufacturers to expand their bases and hire American workers. In recent months, however, some aspects of the plan have begun to unravel, as newly elected Republican governors in Florida, Wisconsin, and Ohio have rejected Federal funding for high-speed rail initiatives in their States, saying that their share of the construction and operating costs made the projects impractical and unaffordable. High-speed rail promoters in Congress and around the country remain undeterred, viewing the technology as essential to developing a strong twenty-first century economy in the face of dwindling oil supplies, increasing highway and airport congestion, and the need to create new manufacturing jobs. They argue that if America fails to invest now in a modern domestic transportation infrastructure, the Nation will be unable to compete successfully in the global economy. America need only look to its past, they reason, when progress was possible because previous generations had the foresight to imagine and invest in bold infrastructure projects that citizens rely on and take for granted today.

Opponents are equally vehement in their assertion that the costs are too high and the benefits too low for highspeed rail to be a viable transportation option for the United States. They maintain that the President’s proposal would commit the Nation to a perpetual stream of Federal subsidies to offset the operating costs of a national high-speed rail network — and that the program, in fact, could become the equivalent of another Federal “entitlement” in its impact on budget deficits. Critics are skeptical that a sufficient number of people would actually use the system, given the continued convenience of cars and predicted advancements in that technology. They also note that high-speed rail lines elsewhere in the world have yet to earn enough revenue to cover construction and operating costs, and rely heavily on government subsidies. In light of the United States’ lack of experience in highspeed rail, the many funding and other challenges projects are likely to face, and the variety of the arguments for and against its development, Congress has a lot to consider. Although the zeal among many for high-speed rail is not likely to be squelched, a commitment by public and private interests of all persuasions may be needed for such a major undertaking to become a reality.

#### HSR funding costs capital – guaranteed fights

WOOD 2 – 8 – 11 CSM Staff Writer

[GOP critic calls Joe Biden's $53 billion high-speed rail plan 'insanity'. By: Wood, Daniel B., Christian Science Monitor, 08827729, 2/8/2011]

Vice President Joe Biden Tuesday proposed that the US government infuse $53 billion into a national high-speed rail network. The announcement was met immediately by deep skepticism from two House Republicans that could be crucial to the plan's success, raising questions about whether it can clear Capitol Hill.

House Transportation Committee Chair Rep. John Mica (R) of Florida said previous administration grants to high-speed rail projects were a failure, producing "snail speed trains to nowhere." He called Amtrak a "Soviet-style train system" and said it "hijacked" nearly all the administration's rail projects.

Meanwhile, Railroads Subcommittee Chair Rep. Bill Shuster (R) of Pennsylvania said Mr. Biden's plan was "insanity," adding: "Rail projects that are not economically sound will not 'win the future' " – coopting the slogan President Obama coined in his State of the Union address.

With Republicans controlling the House and dedicating themselves to deep budget cuts, any new spending proposed by the White House will face stiff scrutiny. But Congressman Shuster offers some hope of compromise. On Jan. 28 in Hartford, Conn., he proclaimed his support for expanding high-speed rail in the Northeast, backing a network that could stretch from Montreal to Washington, D.C.

"This is the most congested region in the country. High-speed rail here could be profitable," he said.

### Infrastructure Spending Costs Capital

#### Infrastructure spending costs Obama capital

HINDERY & GERARD 5 – 15 – 12 co-chairs of The Task Force on Jobs Creation. Hindery is also founder of Jobs First 2012 and a member of the Council on Foreign Relations. Gerard is international president of the United Steelworkers and a member of the executive council of the AFL-CIO

[Leo Hindery, Jr. and Leo W. Gerard, http://www.huffingtonpost.com/leo-hindery-jr/job-creation\_b\_1517730.html]

Last September we renewed our earlier pleas to Congress to 'pick' the four low-hanging initiatives that would, if the administration and Congress together would only pick them, quickly create millions of new jobs. They were and remain:

1. Buy-Domestic Procurement Requirements. All infrastructure projects funded and guaranteed by the federal government should require purchases to be made in America rather than overseas, consistent with our international trade agreements. As well, in order to qualify as "Made in America," at least 75% of the content should have to be manufactured within our borders. Specifically, Congress should:

Require review of domestic content calculations to insure their effectiveness and transparency;

Require review of domestic sourcing requirements for all government procurement programs (e.g., Buy American, the Recovery Act) and programs that support U.S. exports (e.g., the Export-Import Bank) to ensure that contracting agencies are obeying and implementing the requirements; and

Enact a successor to the 1933 Buy American Act, which is now so dated that whole federal agencies are effectively excused and massive procurement 'loopholes' exist.

2. Infrastructure Investment. After years of under-investing in public infrastructure, America faces an infrastructure deficit of $3 trillion that is impeding economic growth and undermining our economy's efficiency. We need to spend $2.2 trillion just to meet America's core infrastructure needs, according to the American Society of Civil Engineers.

The administration and Congress should commit to at least $2 trillion of infrastructure spending over the next 10 to 15 years using the resources of a new National Infrastructure Bank that would be an independent financial institution owned by the government and supported by a soft federal guarantee on the order of $200 billion. This federal guarantee, appropriately structured, would not need to be 'scored' for budget purposes given the numerous layers of investment above it. In turn, the Bank should be able to invite private investment, notably including state and local government pension plan investments, aggregating about $1.8 trillion

Each $1 billion of infrastructure spending funded by the Bank would create around 25,000 permanent jobs. Two trillion dollars of such spending could equate, over the years, to as many as 50 million new jobs.

3. Credit for Small and Medium-Sized Business. Congress should authorize Federal Reserve-related incentives to accelerate commercial bank lending to small and medium sized enterprises, especially those in the manufacturing sector. As it is, such lending, albeit hard to determine precisely, appears to be down on the order of 20% (or more) from its 2007 level before the Recession began. Such incentives could, most easily, simply include an appropriate reduction in the amount of required Tier 1 bank capital.

4. Trade with China. We need to reform our trading with China, as follows:

Enact the Currency Reform for Fair Trade Act (HR 639 and S. 328), which would begin to normalize China's grossly undervalued currency, which (according to the esteemed economist Peter Morici just yesterday (May 14)) remains as much 40% undervalued. The House Republican leaders especially are the naysayers on this issue, notably out of step as they are with the Senate leadership and the currency policies of their own presidential candidate, Governor Romney.

Stop the U.S. government from entering into a bilateral investment treaty with China until China makes WTO-compliant its Indigenous Innovation Production Accreditation Program.

Go after all of China's illegal subsidies, not just its currency manipulation.

Put a halt to China's persistent theft of America's valuable intellectual property, which the U.S. International Trade Commission has estimated would immediately create up to 2.1 million new direct private-sector jobs. Case in point: Microsoft, one of the real gems of American ingenuity, recently sold to a large commercial customer in China one unit of its advanced business software, for several hundred dollars; however, when it sent out an upgrade to the software, the upgrade was downloaded thirty million (30,000,000!) times, which is why Microsoft's profits from sales in China, with its 1.3 billion population, are no greater than its profits in The Netherlands, with its population of only 16.7 million.

The fundamental problem back in September when we last urged Congress to take the actions set forth above and the one which persists today is simple economic arithmetic: we need to create more than 18 million jobs in order to be at full employment in real terms, and every month that we delay we need to create at least 150,000 more new jobs just to keep up with population growth. Yet traditional jobs programs -- whether training or tax breaks or credits -- are by nature 'smallish' and can create at most thousands of jobs and certainly not the millions we need.

With the largely jobless recovery continuing -- only 115,000 new jobs created in April - it's far past time for both Houses of Congress to work with the Obama administration to get really serious about large-scale job creation. Specifically with Congress, President Obama needs to spend his political capital in moving initiatives forward -- initiatives that will be central to his reelection campaign and top priority items during the rest of this Congressional year including the lame duck session.

The alternative of totally leaving job creation to the private sector did not work under President George W. Bush, when the Recession was just starting and the magnitude of the impending real unemployment crisis was unknown. And it certainly won't work in the still-troubled economy we have today, with all respect to Governor Romney who seemingly believes otherwise.

### Fight in Congress

#### HSR funding will cause a fight in congress

TODOROVICH, SCHNED, & LANE 11 1. director of America 2050, a national urban planning initiative, assistant visiting professor at the Pratt Institute Graduate Center for Planning and the Environment and a member of the Board of Advisors of the Eno Transportation Foundation, Masters in City and Regional Planning from the Bloustein School of Planning and Public Policy at Rutgers University 2. associate planner for America 2050 at Regional Plan Association part-time lecturer at the Edward J. Bloustein School of Planning and Public 3. senior fellow for urban design at Regional Plan Association and a founding principal of Plan & Process LLP. Loeb Fellow at the Harvard Graduate School of Design

[Petra Todorovich, Daniel Schned, and Robert Lane, High-Speed Rail: International Lessons for U.S. Policy Makers, September 2011, Lincoln Institute of Land Policy, Policy Focus Report]

In recent years, Congress has addressed the funding shortfall with short-term ﬁxes by transferring general fund revenues to the highway trust fund. However, the need to ﬁnd a long-term solution presents the opportunity to address existing surface transportation needs and high-speed and passenger rail all at once. At some point in the near future, Congress must address the shortfall in national transportation funding. At that time legislators could also dedicate revenues for high-speed and passenger rail as part of the surface transportation program, generated by a variety of small increases or reallocations of current transportation-related fees to provide at least $5 billion in annual funds. Several proposals are currently being considered.

• Raise the gas tax by 15 cents a gallon (The National Commission on Fiscal Responsibility and Reform, 2010) or more. Each additional cent of gas tax generates approximately $1.4 billion annually (AASHTO 2011). Several cents could be devoted to passenger rail.

• Add a $1 surcharge on current passenger rail tickets to produce approximately $29 million annually (Amtrak 2011d). Though this is a relatively small amount of revenue, it could become an important source of funds for expanding and maintaining the system as passenger rail ridership grows.

• Or, shift from a national gas tax to a percentage tax on crude oil and imported reﬁned petroleum products consumed in the United States to fund all the nation’s transportation needs (RAND Corporation 2011). RAND estimated that an oil tax of 17 percent would generate approximately $83 billion a year (at midsummer 2010 prices of $72 per barrel). Five billion dollars of this amount could be dedicated to passenger rail.

Alternatively, if the federal government switched from the current gas tax to a tax based on vehicle miles traveled (VMT) and two-tenths of a penny per mile were dedicated to passenger rail, $5.4 billion could be generated every year (U.S. DOT 2011d). The VMT tax as a source of transportation funding is supported by many transportation policy leaders, but has been disavowed by the Obama administration (Laing 2011b). Former Interior secretary and Arizona governor Bruce Babbitt has proposed that a gasoline tax surcharge in the Northeast Corridor states could pay for high-speed rail in that region (Langdon 2011). This alternative has the advantage of explicitly linking the revenue sources to beneﬁciaries of the system. Other regional taxes, such as a payroll tax on businesses along the corridor, could also be considered. Such a tax is now used in downstate New York to help fund New York City Transit.

Any of these options will face the difﬁcult reality of the current political climate centered on austerity, in which large new infrastructure investments are easy targets for trimming government budgets. Under these conditions, direct government funding alone will not be sufﬁcient to develop high-speed rail. Innovative ﬁnancing solutions will require both the expansion of government subsidized ﬁnancing options and private ﬁnancing initiatives.

#### Massive fight – lobbies, budget concerns, and competitors

KRUMM 94 Harold A. Shertz Award Winner for legal writing – JD at U of Tennessee College of Law

[Brian Kingsley Krumm, Notes: High Speed Ground Transportation Systems: A Future Component of America's Intermodal Network?, Transportation Law Journal, 1994, 22 Transp. L. J. 309]

V. Policy and Legislative Analysis

The Clinton Administration envisions the development of HSGT as a component of an integrated intercity transportation system that includes aviation and HSGT systems in complementary roles, each technology serving its appropriate market niche. n66 As part of this vision, HSGT systems would be fully integrated with intercity bus and intracity bus, rail, and transit systems. Diversions from short-haul air service would free scarce airport capacity, which could then be used for more profitable longer-haul service. n67 HSGT would also address highway congestion by diverting a portion of highway trips. n68 This would result in an improved environment and reduced dependence on fossil fuels.

Such policy objectives are widely supported by a large segment of the traveling public, as well as politicians who see HSGT as a mechanism for bringing jobs and economic development to their states. However, a number of forces shaping the high speed rail legislation today have little to do with the development of a coherent, long-term transportation policy. The primary force is the federal budget deficit, a major "stumbling block" to the implementation of HSGT systems in the United States. n69 High speed ground transportation infrastructure is costly, and costs increase as the design speed increases. n70 Funding for HSGT projects and programs has not met expectations; the 1993 and 1994 appropriations for HSGT system development under ISTEA were not funded as authorized. The Clinton Administration's "incremental approach" to HSGT, which builds on existing infrastructure and requires little or no acquisition of rights-of-way, is at least in part a recognition that levels of funding anticipated for HSGT infrastructure development during the campaign, are unlikely to be realized in this period of fiscal restraint.

Ultimately, the incremental approach may prove to be a politically desirable strategy for the Administration to pursue. In order to obtain the broad-based support needed in Congress to pass the High Speed Rail Development Act, the potential must exist for a broad spectrum of states to at least be eligible for funding. The incremental approach offers just such an allure. Although states may not be currently pursuing formal plans for HSGT systems, they do have existing railroads which could serve as the backbone for incremental upgrading. The legislation is written broadly enough to be attractive to legislators whose states lack such formal plans, yet provides the Secretary of Transportation with the necessary discretion to focus the funding once appropriated. This will allow the DOT to fund those projects that have the greatest potential for successful development and operation.

However, the same characteristics in the legislation that initially attracted strong bipartisan support in the House Energy and Commerce Committee have come under fire from the railroad unions and freight railroads which would provide most of the trackage under the incremental approach. The transportation unions, which believe the new routes could result in layoffs or wage cuts for workers on conventional rail and bus lines, want provisions included to protect them from such career-ending events. n71 Although the version of the bill that the House Energy and Commerce Committee reported on July 27, 1993 includes several provi [\*321] sions to protect transportation workers, it does not go far enough to satisfy the unions, and goes too far for many Republicans who might otherwise support the bill. n72 Additionally, the freight railroads want shielding from lawsuits that might result from high speed rail accidents occurring on their trackage. Discussions concerning this liability are being pursued within the House Judiciary Committee, but no solution has been found. n73 A proposal which would place a cap on the liability of the freight railroads was recently submitted to Senator Ernest Hollings by the Association of American Railroads. n74 Such liability concerns are likely to be amplified as a result of the recent wreck of Amtrak's Sunset Limited. n75

In addition to the concerns expressed by the transportation unions and the freight railroads, there is also fierce competition from other modes of transportation, both for the limited share of the federal funds and for the potential passengers or users of the particular mode of transportation. An example of this competition is the Partnership for Improved Air Travel, a lobbying effort supported by the large airline and aircraft companies to pursue additional public spending on airports and opposing proposed increases in airline ticket and fuel taxes. n76 The Chairman of Southwest Airlines, Herb Kellehar, the chief spokesperson for this group, is also a major opponent of HSGT. n77 Southwest Airlines bitterly opposes the construction of HSGT, especially the Texas high speed rail line that would provide service to a number of the cities that the airline currently serves. n78 The lobby places subtle, yet effective, pressure [\*322] on Congress not to subsidize HSGT at the expense of "self supporting" commercial aviation, conveniently overlooking the massive subsidies that the airlines enjoy. n79

Compounding the problem that other modes of transportation must also compete for federal transportation dollars is the fact that the Clinton Administration legislation and the DOT place the responsibility for making important transportation financial resource allocation decisions on the state and local governments. Although it appears to be sound fiscal policy to ensure that adequate public and financial commitment exists for HSGT projects at the state and local levels before the federal government participates financially, a number of practical concerns need to be considered.

### GOP hates the aff

#### GOP hates the HSR

ZHENHUA 11 PhD student at the George Mason University, School of Public Policy, and is currently working as a graduate research assistant under the supervision of Prof. Jonathan Gifford in the area of transportation policy [Zhenhua Chen, Transportation Law Journal, Article: Is the Policy Window Open for High-Speed Rail in the United States: A Perspectives from the Multiple Streams Model of Policymaking, Summer, 2011, 38 Transp. L. J. 115]

C. Political Stream

In the MS model, flowing independently alongside the problem and policy streams, the political stream is composed of such things as national mood, pressure group campaigns, election results, partisan or ideological alignments in Congress, and changes of administration. n81 The emergence of a HSR is mostly pushed by two major components of political stream: ideological alignments in Congress and changes of administration. In the United States, the idea of HSR stands for a new dimensional perspective that aims at solving contemporary transportation problems, such as relieving congestion and greenhouse gas reduction. n82 However, because of the unpredictable social and economic outcomes and tremendous capital cost, Republicans and Democrats have formed different standpoints regarding government's role in HSR spending. Republicans generally represent a conservative ideology on government spending. They believe government spending on HSR is too risky to be affordable. n83 Democrats, generally represent a liberal ideology, prefer increasing government spending on HSR to spur development and achieve better connection among city centers. n84 These ideological discrepancies can be tracked by the recent usage debate of HSR stimulus money in Madison, Wisconsin. [\*130] Democrats proposed a new state office building be one of the first new station stops on a high-speed rail network paid for primarily with federal dollars, while Republicans opposed that idea because of a concern about runaway government spending. n85 From a broader view, through the party initiation of HSR and Maglev related bills proposed from 1991 to 2008 (See Table 2), HSR and Maglev matters are more likely to be addressed by Democrats than Republicans in Congress. n86 Consequently, the shift of the political majority in both Congress and the administration directly affects the viability of HSR proposals on the governmental agendas.

#### GOP hates infrastructure spending

JOHNSON 5 – 1 – 12 Fellow, Campaign for America's Future

[Dave Johnson, Transportation and Infrastructure = Immediate Jobs = Deficit Reduction, 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.) 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 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.

The Obstruction

We have been deferring infrastructure maintenance since the Reagan years, but in recent years Republicans have doubled down on blocking public investment, calling it "just more government spending" and even "socialism." And, they complain, construction projects help union members.

So Republicans have blocked bill after bill to repair and modernize the infrastructure, or to maintain and modernize our aging transportation system, build high-speed rail, etc. The president discussed this obstruction in his speech

... 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 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.

### Fossil Fuel industry

#### Fossil Fuel industry insures a HSR fight

PROK 09 J.D. University of Denver Sturm College of Law, B.A. (2004) University of Colorado at Boulder

[Joshua D. Prok, Article: High Speed Rail: Planning and Financing the Next Fifty Years of American Mobility, Transportation Law Journal, Spring, 2009, 36 Transp. L. J. 47]

Former President George W. Bush recently stated, "America's got to change its habits; we've got to get off oil[... ] Until we change our habits, there's going to be more dependency on oil." n192 The existing high speed rail development structure entails a choice among technological alternatives that rely on different power sources for locomotion, namely: diesel, electricity, n193 and electromagnetism. n194 In an environmentally-sensitive age, society is perhaps more motivated to develop high speed rail technologies that will rely less on fossil fuels, especially foreign oil. n195 Since adherence to conventional scarce energy resources for transportation also dictates war and peace, the market becomes another potent factor on this choice as never before.

Spiking oil prices in 2008 showed the dangers inherent in the prevailing [\*69] undiversified transportation fuel situation. n196 High and volatile gasoline prices decreased consumer demand for automobiles. n197 High liquid fuel prices, and the weak dollar, even translated to higher food prices. n198 High fuel prices have also forced airlines to cut costs, service routes, and jobs, while increasing fares. n199 As for motor carriers, independent truckers vociferously protested in Washington for relief, one Pennsylvania trucker saying, "if we don't do something, then the next time you see us, we'll be in the welfare line[.] There are so many people here hurting." n200 "Environmentalists, hunters, landowners, and lawmakers" also have rallied to stop domestic oil and gas production. n201 These outcries show that the rising costs of conventional transportation fuels put parts of the transportation business at risk. At the same time, they highlight an opportunity to diversify and change.

The current energy economy thus provides an atmosphere that should prompt high speed rail planners to choose electrified systems. France adopted a Grand Strategy to power its intercity rail with nuclear and hydroelectric generation. n202 It subsequently reduced its carbon emissions from liquid fuels by some 34% in 2000; meanwhile, the U.S. increased its emissions by 2.4% during the same timeframe. n203 Indicating a break from this shameful record, President Obama made environmental stewardship part of his campaign platform in 2008. n204

### Link turns the aff

#### Public support key – gets funding and private groups involved

PROK 09 J.D. University of Denver Sturm College of Law, B.A. (2004) University of Colorado at Boulder

[Joshua D. Prok, Article: High Speed Rail: Planning and Financing the Next Fifty Years of American Mobility, Transportation Law Journal, Spring, 2009, 36 Transp. L. J. 47]

D) Enhancing Popular Support

Whether by taxation, administering direct grants and guarantees, controlling debt issuance, or resolving intermodal disputes, governmental mechanisms will largely control funding the advancement of high speed [\*67] rail in the U.S. Therefore, popular support, reflected in the policy forwarded by elected governmental officials, is a key to successful implementation of the existing high speed rail service plans. Wavering public support led to the preliminary failure of a Transrapid maglev project in Germany. n180 Conversely, the enhanced power of government in China may have made their decision to develop high speed rail easier as it built the first commercial high speed maglev route which began revenue service in January 2004. n181 Recently, the Committee on Senate Banking, Housing and Urban Affairs heard testimony regarding the establishment of a National Infrastructure Bank, n182 proposed by Senator Hagel, and modeled after the European Investment Bank, that would use a $ 60 billion initial appropriation to catalyze private investment in infrastructure improvements, including a "railway that is as good as Europe's." n183 Authorizing the National Infrastructure Bank to issue "long bonds" that mature in up to fifty years, and to provide subsidies of "credit insurance, interest rate discounts, or even grants," would constitute a huge step forward in putting State high speed rail plans into action. n184

Without risking paternalism, or even socialism, in continuing high speed rail development policy, another way to gauge public support is to enhance public participation in the planning process. The federal government is already implementing pilot programs that encourage public participation in the transit planning process. n185 Also, the FTA's work in encouraging Transit Oriented Development is important for the public to practically use new high speed rail. n186 Integrating high speed rail into intermodal transportation hubs, like the San Francisco International Airport, will make high speed rail accessible and competitive in the intercity transportation market. n187 California meets this need by accommodating high speed rail development into airport facilities. n188 Florida also recognized [\*68] the benefits of high speed rail in the urban development overflow of "associated development." n189 Such associated development has already occurred around railroads in Texas. n190 If the public is more involved in planning, and continuing urban development and renewal provides a lifestyle conducive to using transit systems, including intercity high speed rail, advocacy for enhanced public funding may become more robust.

Mobilizing public support, however, presents a significant hurdle for bridging the gap from planning to implementing high speed rail in the U.S., given the spirit of individualism that permeates this nation. In this vein, the centuries-old commentary of Alexis de Tocqueville largely still rings true: "[the] American way [is] relying on [oneself] alone to control [one's] judgment." n191 Thus, if the public fails to support bond initiatives to raise capital for high speed rail, or appears unreceptive to transit oriented development, market forces will provide the extra impetus to surmount the current challenges in enhancing transportation infrastructure in the U.S.

### Plan popular

#### Politically popular – ever major area benefits

LEVINSON 12 Networks, Economics, and Urban Systems Research Group, University of Minnesota, Department of Civil Engineering research was funded by New York University

[David M. Levison, “Accessibility impacts of high-speedrail,” Journal of Transport Geography, Volume 22, May 2012, Pages 288–291. Special Section on Rail Transit Systems and High Speed Rail]

These hub networks in the Federal High-Speed Intercity Passenger Rail Program includes the top 47 metropolitan areas of the United States (and many smaller ones), the largest city not in the Program (but apparently in the Vision) is Salt Lake City, Utah, at 50, with just over 1 million people in the metro area.2

The political genius of the intercity passenger proposal is that it includes lines in all but 8 of the 50 states.3 This is a practice learned in transportation from previous national packages, the Interstate Highway System (with miles in all 50 states, including special routes in Alaska and Hawaii) and Amtrak (nearly so), helping ensure strong support in the US Congress, especially the Senate.

## Counterplans

### States – acting in groups now

#### States acting in groups now

PRUM & CATZ 11 \*Assistant Professor, The Florida State University \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine

[Darren A. Prum\* and Sarah L. Catz\*\*, ARTICLE: GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?, Santa Clara Law Review, 2011, 51 Santa Clara L. Rev. 935]

At the same time, decades-old policies that create vicious cycles for more highways and greenhouse gas emissions require revamping to meet the new paradigm of today's reality. n5 Much of our current transportation policy originates from decisions made over a half century ago. n6 Congress revisits and adjusts these plans every six years, but the current policy fails to account for modern environmental issues like global warming and neglects many parts of the country that need assistance in reducing greenhouse gas emissions.

Recognizing the threat from climate change and seeking solutions of their own, several states individually and collectively have begun searching for short and long term solutions. Some states, like Florida, directly mandate that local governments evaluate the impact of transportation on greenhouse gases, n7 while California uses an environmental agency to develop specific targets for emission reductions based on pollution sources. n8

[\*937] In another interesting turn of events and due to a lack of action by the federal government in the past to create a comprehensive national approach, regional compacts amongst states and provinces now occur across North America to combat climate change. n9 These regional compacts look to create "cap-and-trade" zones with regard to the emissions of greenhouse gases in their jurisdictions so that uniformity occurs over a broad geographic region. n10

#### States act together through regional pacts

PRUM & CATZ 11 \*Assistant Professor, The Florida State University \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine

[Darren A. Prum\* and Sarah L. Catz\*\*, ARTICLE: GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?, Santa Clara Law Review, 2011, 51 Santa Clara L. Rev. 935]

In considering the efforts by other states with respect to greenhouse gas emissions and transit, three main strategies emerge. Some states take action on their own while others choose to band together for a regional approach or some [\*957] combination of both applications occurs. Accordingly, both require examination.

1. State Initiatives

Following California's lead, many other states decided to exercise their own authority to protect their jurisdictions against climate change. The government strategies that tackle greenhouse gases in the context of transit tend to get grouped into four different categories: Technology, Fuels, Travel Activity, and Vehicle/System Operations. n126

In the context of this examination, the effect of technology on greenhouse gas emissions remains largely a federal one and mainly affects transit indirectly. States have two options with regard to vehicle emissions. Should the State of California satisfy its special exception requirements under the Clean Air Act, n127 other states may choose between adopting the baseline federal level or the more stringent California one. Recently, many states began selecting the California approach with sixteen states already announcing adoption of the California approach or the intention to proceed in that direction. n128 Interestingly, the federal [\*958] government also agreed to match the California standards by 2017, n129 which makes the state regulatory aspect a nonfactor.

From a fuels perspective, many states have adopted different standards to limit carbon content, which will reduce greenhouse gas emissions on a per-mile-driven basis. n130 Correspondingly, thirty-eight different states decided to encourage the use and production of this alternative through tax exemptions, credits, or grants. n131 Taking this approach to a higher level, thirteen states created a unique blend of fuel for its jurisdiction. n132 While the different fuel standards will lower greenhouse gas pollution, their greatest impact will occur with emissions emanating from automobiles and light duty trucks. Furthermore, the blends will affect some forms of transit, like buses, but will have essentially no direct effect on the delivery of transit options from a state regulatory aspect.

Finally, many states took action to limit their jurisdiction's growth of vehicle miles traveled (VMT), n133 which comes from both the travel activity and vehicle/system operations factors. In this area, the state and local governments can cause a reduction in greenhouse gases by encouraging changes in habits like idling less, fewer trips, and traveling shorter distances through their various policy [\*959] tools. n134 In short, many states choose to promote these changes by setting goals or targets for reducing VMT, and sometimes a jurisdiction adopts "smart growth" policies as well. n135

As previously discussed in the SB 375 section, "smart growth" regulations that link land use with transportation systems can reduce greenhouse gas emissions. State legislatures use these "smart growth" strategies to create initiatives to reprioritize land use, promote alternative modes of transportation, create individual incentives, and foster system efficiencies to achieve their emission goals. n136 Based on these understandings (and aside from California's legislation), other states have enacted smart growth laws that directly impact transit and mention environmental concerns; n137 but these states' approaches seldom take the added step of tying these goals directly to land use strategies with mandates to reduce greenhouse gas emissions. n138

For instance, the State of Washington's legislature passed the Growth Management Act in 1990 because the legislature found that, uncoordinated and unplanned growth, together with a lack of common goals ... pose a threat to the environment, sustainable economic development, and the health, safety, and high quality of life enjoyed by residents of this state. It is in the public interest that citizens, communities, local governments, and the private sector cooperate and [\*960] coordinate with one another in comprehensive land use planning. n139

From this starting point, the legislation specifically mandated ecological goals that encompass comprehensive plans while including development regulations to protect the environment, boost the State's high quality of life, encourage different modes of transportation, and improve air and water quality. n140 In accordance with the legislative goals, the act mandated transit-oriented site planning, including traffic demand management programs, because the new "fully contained communities," major industrial developments in master planned locations, and areas planned for multiple industrial sites outside urban growth areas will most likely create significant greenhouse gas emissions by requiring individuals to commute great distances. n141 While the act sought to prevent uncoordinated and unplanned growth in Washington, n142 it stopped short of mandating greenhouse gas emission targets, like the comparable legislation in California, despite recent recommendations from studies conducted by two governmental agencies in Washington. n143

Likewise, Florida passed legislation in 2008 that requires local comprehensive plans to take into account supporting energy efficient development patterns and schemes that dissuade urban sprawl. n144 The statute also includes a unique directive for local governments to adopt "transportation strategies to address reduction in greenhouse gas emissions from the transportation sector." n145 This means that the plans must encourage walking and bicycling while requiring the [\*961] establishment of "transportation demand management programs" that reduce per capita VMTs. n146

Thus, many states try to challenge global climate change through Technology, Fuels, Travel Activity, and Vehicle/Systems Operations. Nonetheless, the California legislation provides a groundbreaking approach, unmatched by other states, that now ties the existing travel activity category with broad greenhouse gas emission targets and land use plans in order to assemble a comprehensive effort to combat climate change.

2. Regional Approaches

Aside from each states' individual approaches, many states have decided to pursue the reduction of greenhouse gases in conjunction with other jurisdictions. Through this strategy, these states can increase efficiency because more uniform regulatory settings occur and duplicative efforts are removed. n147

One of the earliest programs to try this approach was the Regional Greenhouse Gas Initiative (RGGI) formed by several states in the Northeast. n148 The plan began with a Memorandum of Understanding, which was signed by seven governors in December 2005 with the goal of reversing global warming. n149 Following the RGGI approach, several Western states formed the Western Climate Initiative in February 2007, n150 and several states in the Midwest created the [\*962] Midwestern Regional Greenhouse Gas Reduction Accord in November 2007. n151 Interestingly, the State of Florida initially planned to implement its own program, but may instead join another association or foster one within the Southeastern region. n152

In reviewing these initiatives, their main emphasis includes the creation of programs to lower carbon dioxide emissions from the existing production of electricity, to expand the generation of power from renewable sources, to collect data on renewable energy credits, and to conduct research and develop guidelines for carbon sequestration. n153 The RGGI approaches its mission through a "cap-and-trade" type of program aimed solely at electrical generation. n154 The other initiatives, however, augment the "cap-and-trade" by including industrial combustion and processing sources along with fuels used by residential, industrial, and commercial buildings, as well as in transportation. n155

### Devolve Solvency Advocate

#### Here’s our devolve solvency advocate

UTT 2 – 7 – 12 Ph.D, the Herbert and Joyce Morgan Senior Research Fellow in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation

[Ronald Utt, “Turn Back” Transportation to the States,” Heritage]

Out of this melee for money will emerge a new transportation bill that will reflect the influence of many lobbyists and influential constituencies—euphemistically referred to as stakeholders—rather than the needs of the motorists or truckers who pay the taxes to fund the program, as well as the requirements of an economy that depends on cost-effective mobility.

With the latest dispute still unresolved, Congress and the President should try to escape this predictable money morass and instead craft a plan that benefits the motorists, bus operators, and truckers who pay the federal fuel tax that fills the trust fund and finances the system. To accomplish this, any new legislation should:

Be limited to programs that enhance mobility and safety;

Add capacity where needed on modes that people want to use;

Relieve congestion;

Upgrade existing infrastructure; and

Devolve the resources and decision making to the states, which know their priorities better than Washington does.

The government could accomplish these goals with a simple, efficient, and attractive option: Return the federal highway programs to the states, where much of the responsibility had been lodged until the Federal Aid Highway Act was enacted in 1956.

#### Devolution bills introduced annually

UTT 2 – 7 – 12 Ph.D, the Herbert and Joyce Morgan Senior Research Fellow in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation

[Ronald Utt, “Turn Back” Transportation to the States,” Heritage]

Keep the Pressure On

The first “turn back” bill was introduced in Congress in 1997 by Senator Connie Mack (R–FL) and Representative John Kasich (R–OH). It earned about two dozen co-sponsors and received the explicit endorsement of more than 20 states—mostly donors. Since then, some version of a turnback bill has been introduced in every Congress, and while none has come close to passing, the defects in the program that have led to ongoing interest in the bills have come under scrutiny and concern.

Subsequent reauthorization bills have attempted, with some modest success, to address the equity issue. More recently, however, the House and Senate versions of the next reauthorization bill propose to reverse the past trends toward an increasingly Washington-centric program significantly by giving the states more flexibility in deciding how the funds they receive from the federal trust fund can be spent. With momentum moving in turnback’s favor, the existence of these bills will keep the pressure on for a program of greater state responsibility and discretion.

### Public/Private Solvency

#### Public-Private partnerships cover funding & start up for investments

TODOROVICH, SCHNED, & LANE 11 1. director of America 2050, a national urban planning initiative, assistant visiting professor at the Pratt Institute Graduate Center for Planning and the Environment and a member of the Board of Advisors of the Eno Transportation Foundation, Masters in City and Regional Planning from the Bloustein School of Planning and Public Policy at Rutgers University 2. associate planner for America 2050 at Regional Plan Association part-time lecturer at the Edward J. Bloustein School of Planning and Public 3. senior fellow for urban design at Regional Plan Association and a founding principal of Plan & Process LLP. Loeb Fellow at the Harvard Graduate School of Design

[Petra Todorovich, Daniel Schned, and Robert Lane, High-Speed Rail: International Lessons for U.S. Policy Makers, September 2011, Lincoln Institute of Land Policy, Policy Focus Report]

P U B L I C - P R I V A T E P A R T N E R S H I P S

Public-private partnerships (sometimes referred to as P3s) generally constitute any arrangement between a government sponsor and a private sector entity in which the private entity provides one or more stages of the project delivery process—designing, building, operating, owning or leasing, maintaining, and ﬁnancing parts of the infrastructure. These partnerships offer the beneﬁt of ﬂexibility to suit the speciﬁc needs of the public sector while encouraging different models of private involvement and investment (Geddes 2011).

Public-private partnerships are considered an especially attractive solution for ﬁnancing infrastructure projects. For example, the Florida Department of Transportation was already in the process of ﬁnding a private partner to design, build, operate, maintain, and ﬁnance the state’s high-speed

rail line before the project was cancelled in February 2011 (Haddad 2010).

#### Public-private partnerships work

TODOROVICH, SCHNED, & LANE 11 1. director of America 2050, a national urban planning initiative, assistant visiting professor at the Pratt Institute Graduate Center for Planning and the Environment and a member of the Board of Advisors of the Eno Transportation Foundation, Masters in City and Regional Planning from the Bloustein School of Planning and Public Policy at Rutgers University 2. associate planner for America 2050 at Regional Plan Association part-time lecturer at the Edward J. Bloustein School of Planning and Public 3. senior fellow for urban design at Regional Plan Association and a founding principal of Plan & Process LLP. Loeb Fellow at the Harvard Graduate School of Design

[Petra Todorovich, Daniel Schned, and Robert Lane, High-Speed Rail: International Lessons for U.S. Policy Makers, September 2011, Lincoln Institute of Land Policy, Policy Focus Report]

While public-private partnerships are likely to increase in popularity as an option for cash-strapped governments, applying this approach to high-speed rail must be done carefully, with a realistic understanding of the beneﬁts and challenges.

Sharing risk: Partnerships allow the public sector to share project risks related to construction, environmental review, system performance, and ridership with their private partner. Properly assigning risk to the party best able to manage it is critical to a successful project. In general, private partners are better able to control construction and ﬁnancing risk, and public partners are better able to manage political and entitlement risk. Ridership risk is shared by both parties, with the opportunity for both to beneﬁt when ridership exceeds expectations. Attention to the private entity’s susceptibility to market downturns is also important. The private entity should not shoulder so much risk that it could endanger its ability to live up to the terms of the contract.

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

Faster project delivery: Private entities can draw on experience to deliver projects on time and on budget. They are also motivated by ﬁnancial incentives for performance (including availability payments), which can be written into the structure of the deal.

## Kritiks

### Cost-Benefit Analysis key

#### Cost-Benefit analysis of infrastructure projects key to prevent exaggeration of benefits

GLAESER 09 economics professor at Harvard

Edward L. Glaeser, Is High-Speed Rail a Good Public Investment?, <http://economix.blogs.nytimes.com/2009/07/28/is-high-speed-rail-a-good-public-investment/>

I would be delighted to share the president’s optimism about high-speed rail, but if benefits do not exceed the costs, then America will just be living through a real-life version of “Marge vs. the Monorail,” where the residents of the Simpsons’ Springfield were foolishly infatuated with a snazzy rail project oversold in song by Phil Hartman’s character.

Economics doesn’t have any inherent opinion on trains, but it does strongly suggest the value of cost-benefit analysis, which may be the best tool ever created for evaluating public investments

Large infrastructure projects are complicated things that all have hundreds of consequences, some good and some bad. It is easy to come up with good and bad side effects of high-speed rail: More people coming into a centralized train station might reduce long car trips associated with sprawling airports (that’s good), but increase congestion in the city (that’s bad).

These ideas are so cheap that unless they are seriously quantified they have no place in the debate. Serious accounting, not clever debating points or soaring rhetoric, is the critical ingredient in good public decision-making.