

## California High Speed Rail: Results for Hire: Fact Check

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By **Kathy Hamilton**, SF Transportation Policy Examiner

There are many “facts” that continue to be the High Speed Rail Authority’s mantra as they continue to promote the High Speed Rail mega project. Let’s look at some of them.

1. The project will create 600,000 jobs
2. High Speed Rail is environmentally friendly
3. Plenty of private and federal funds will be available

Fact or fiction? You decide.

1. Jobs: Win, lose or draw?

**Claim:** More than 600,000 new jobs will be created as a result of this project

Bent Flyvbjerg, Professor at the University of Oxford, U.K. Research Director, PHD and expert in Mega Project design says, “job creation and other local economic benefits invariably used by proponents to justify the billions spent on such projects often do not materialize or are so weak that they can’t be measured outside the temporary jobs generated by construction itself, which may be substantial, but the benefits of which end the day the last construction worker leaves the site.” Flyvbjerg is currently continuing research on megaprojects using [phronetic planning](#), a social science which focuses on four value-rational questions: (1) Where are we going? (2) Who gains and who loses, by which mechanisms of power? (3) Planning research and (4) What is the relationship between [truth and lying](#) in policy and planning. Flyvbjerg’s research has been covered by Science, The Economist, The New York Times, the BBC, and other media.

The High Speed Rail Authority( HSRA) asserts that 600,000 jobs will be created with this project. The Authority used a rule of thumb whereby 20,000 total jobs are generated per \$1 billion spent in construction. While they did not have anyone specifically who could talk to me, the Rail Authority personnel point to [Job estimate numbers](#) and the Authority’s [2008 Business Plan](#) as their source.

According to the definition from the HSRA, the federal government has defined job estimations for ARRA funded projects as “a 40 hour per week, 52 weeks-a-year position equates to a 1 year job equivalent.” Using this definition, this could mean that for each person who has a one year contract and renews it at the end of each year, each renewal could be counted as a separate job. In other words, 10 contract renewals during 10 years could equal 10 jobs.

Elizabeth Alexis, economist, commented. “Unless a very odd definition of ‘job’ is being used, High Speed Rail won’t generate a lot of jobs for Californians during the construction phase. In fact jobs

may actually be lost.”

According to an analysis prepared by Alexis, co-founder of Californians Advocating Responsible Rail Design (CARRD) and an econometrics expert, “\$25 billion will generate the equivalent of 75,000 years worth of employment using the 3 jobs/ \$1 million ratio. Over the 10 years that planning and construction are expected to last, this would mean about 7,500 more Californians at work each year. In addition, some of the raw materials used in construction might be produced in California. The total number of construction-related jobs could be 100,000-120,000 one year jobs, which is equivalent to 10,000-12,000 jobs that last the 10 years that construction is expected to last.”

She also explains that projects with heavy capital expenditures net far fewer jobs than spending money on service oriented projects. It stands to reason that if you’re spending dollars on concrete, steel and trains, there’s less money to spend on labor. According to Alexis, \$1 million spent on services equals 20 full time jobs for one year, whereas the same amount spent on heavy construction nets only 3 jobs.

She explains that “this number should be netted against the job losses from not spending money on education and health care. A really simple and conservative way to do this is to look at the size of the bond measure. Diverting \$9 billion to High Speed Rail is the equivalent of cutting 180,000 one year jobs, with most concentrated in health care and education.”

“A more complicated way is to look at the debt servicing costs (the interest we pay to the buyers of the bonds). This debt service could be spread out for as long as 30 years. Using this approach, there would be 11,000 to 14,000 fewer jobs each year for the next 30 years. If project costs were to escalate or private sector financing to fall through, this number could go even higher.”

**Reality:** “Either way, California workers could actually lose jobs when the math is done. If you just look at the numbers for the stimulus request funds, it looks even worse because California has promised to put up 50% of the funds,” says Alexis. For the complete study please click on [Jobs: fact check](#)

## 2. Energy Efficiency?

**Claim:** High Speed Rail is the most energy efficient of all transit choices.

When it comes to the environmental costs and benefits of high-speed rail (HSR) versus cars or planes, most Californians assume that HSR is the clear winner. But is that so?

In the Spring Publication of Berkeley’s on line website, Arpad Horvath, Associate Professor of Civil and Environmental Engineering and Mikhail Chester, an ITS post-doc researcher, say “it depends”. This is an excerpt from their article on the [High Speed Rail Cycle](#): “Producing concrete, particularly its cementitious component, is a [green house gas] GHG-intensive process,” said Chester, and concrete will be required in vast quantities for the rail project, not only in the construction of retaining walls and aerial track segments, but also stations and smaller facilities.

“High-speed rail in general may reduce GHG emissions, but you could have a situation where you’re trading those reductions for increases in other emissions, like sulfur dioxide.”

“In their calculations, the researchers factored in only modest stations—not the larger terminals and buildings that are being discussed in major cities like San Francisco, San Diego, and Los Angeles. Nor did they include the processes and materials required to build tunnels under cities or through communities that object to the presence of high-speed rail above ground.”

**Reality:** "Under current conditions—with the model of HSR trains proposed and its energy source, as well as the types of automobiles and airplanes now in existence—the ITS researchers found that high-speed rail has the potential to be the lowest energy consumer and greenhouse gas emitter only if it consistently travels at high occupancy or uses a low-emission electricity source such as wind, both of which will require appropriate planning and continued investment," says Horvath and Chester.

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."

### 3. Financial Viability: Do we have the bucks?

**Claim:** The cost is roughly estimated at \$42 Billion for construction costs. HSRA says the funds will come from these sources: Fed Money- \$18 billion, Private investment-\$10 billion, Bond money \$9 billion and Local cities- \$4-5 billion.

**Reality:** Federal fund allocations for the entire US have been dropping from an allocation \$8 billion year one (CA granted \$2.25 billion), \$ 2.3 billion year two (we have an application in for about \$1 billion) and \$1.4 billion expected next year. With the political atmosphere as it stands today, it is an unreasonable expectation that California will receive \$18 billion from the feds in 6 years.

Let's talk about bonds for a minute. The money is not without cost to California. Just like a mortgage on your home, you have to pay the money back, with interest. Financing programs through bond measures are not "free." While we do sell the bonds and get money for them, we pay a high rate of interest because we do not have a good credit rating. Who pays the interest or debt service? The answer: we do. It is paid out of the general fund not the bond money. So before a dime can be spent on important services, we pay the investors. As Alexis says, "Every dollar that has to support the bond measure is money NOT spent on education/home health care etc."

According to Bill Warren, retired Silicon Valley business consultant, with a Finance MBA from Stanford, offers lots of "ifs" about the program's finances. If the feds come through with the \$18 billion of "free" grants, and if the HSR Program meets its construction cost projections, and if its revenue and operating cost projections over the first 20 years operation are accurate, the taxpayers could repay most, and even possibly all, of the \$9 Billion in bond debt by 2035. But if the High Speed Rail Authority can't get the budgeted federal funds and receives a maximum of \$4-5 billion, we have a big problem. If instead the state is forced to sell more bonds or attract additional private investors and turn toward a fixed return type of equity investment, California taxpayers could pay debt retirement costs, interest charges, and returns for private equity up to \$25 billion, that's in addition to the \$9 billion we already signed up for.

In case the riders don't materialize as projected and the revenue falls short 25%, Warren says we can add another \$10B of additional taxes over the 2020 to 2040 time period. "Trying to fund a \$43 billion to \$50 billion construction project without piles of 'free money' requires lots of expensive borrowing or private investing that in all likelihood can never be paid back out of yearly revenue streams, leaving

the taxpayers like the pig who is invited to the barbecue.”

In his August 22 opinion piece in the San Jose Mercury news, Rod Dirdion stated, “As many as 28 investment groups have already signed nonbinding letters of interest.” Unless these are additional companies that have expressed interest, HSRA's own October, 2008 analysis of private investment, prepared by the Authority, provides a bit more perspective. According to the analysis, 4 out of 5 banks who responded insist on two factors for participation in the project: favorable concession terms and risk sharing arrangements. Since risk sharing is strictly forbidden by the regulations in the laws, interest from potential investors may diminish. There are other types of investor companies in the report however banks are not in the business of selling equipment or services so their view is purely financial with an eye toward risk aversion. See the total report [Private Investor Response Report](#)

Democrat, Bill Lockyer declared the project isn't viable and he's not just any voice, he's our state Treasurer. In an article in Sign on San Diego - [Lockyer's Straight Talk](#) he said, “There are dozens if not hundreds of infrastructure investment funds on the planet. There are a lot of infrastructure funds like that, that are public and private, probably trillions of dollars looking for good deals. So there's the financing potentially available if it's a good deal. I'm just not yet convinced the investors are going to think that's (CHSR) a smart investment to make. Lockyer also added that he would be reticent to try to go to market to issue the 9.95 billion in bonds, approved by the voters in November 2008. “You can't sell this. No one will buy this bond, certainly not at any reasonable price.”

Flyvbjerg mirrors Locker's exact sentiment in his book, “Megaprojects and Risk”. He too says “that both in principle and in practice there is abundant private capital available for profitable projects. If such capital is not forthcoming for a project this is because the market does not believe in it.” He believes that private risk capital must be used in order to avoid the risk of taxpayers being held captive to the rent-seeking behavior of special interest groups [contractors, consultants or politicians and administrators] be they after “profit or fame.”

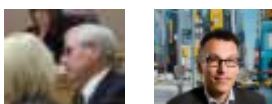
He believes that “the decision to go ahead with a project –given the project satisfies agreed public interest objectives- be conditioned by the willingness of private financiers to participate in the project without sovereign guarantee” in other words genuine risk capital with state guarantees in our case.” Flyvbjerg believes, “only if this risk capital can be mobilized will the project is built.”

The reality is that we don't actually have the money. High Speed Rail has 9 billion in bond money, allocated for sure but the law requires a 50% match. Only \$1.616 billion in Stimulus segment funds is available to build the segments (other monies were taken out of the previously granted, \$2.25 billion for the Transbay terminal and other projects). With the matching criteria, only the same dollar amount is available to them in state bond funds. So at this moment the state has a maximum of \$3.232 billion available to spend including the match from state bonds. See page 2 of this [HSR document](#): So actually High Speed Rail has only about 7.5% of the most conservative total project cost.

Does High Speed Rail add up? You decide.

See the previous article: [Results for Hire](#)- Mega Project Estimate Failures

### Slideshow: Oxford Professor Bent Flyvbjerg



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