

High Speed Rail: Do It Right

Begin by shutting down the California high-speed rail project

By Patrick Ruckert

March 1, 2019



Rich Pedroncelli | AP One of the elevated sections of the California high-speed rail project under construction in Fresno. There are a dozen or more isolated sections like this one under construction scattered along the route in the Central Valley.

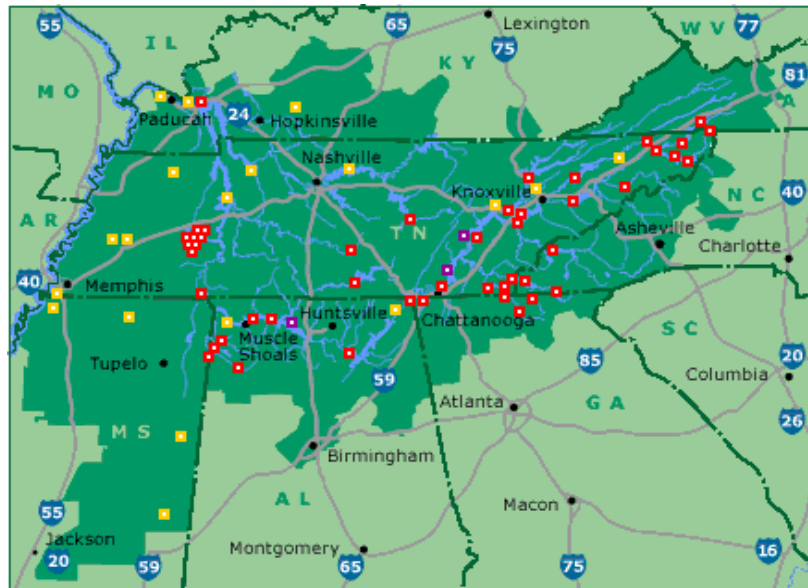
As the California high-speed rail project has moved from disaster to catastrophe, many in the state have ignorantly, or opportunistically, denounced the project as an example to demonstrate that public infrastructure projects, and high-speed rail in particular, cannot work, are boondoggles, and “prove” that government must not involve itself in such projects.



Lincoln's Transcontinental Railroad: The Central Pacific's engine Jupiter and the Union Pacific's engine No. 119 meet on May 10, 1869, at Promontory Summit, Utah.

Both the federal government and the California state government, in the past, have initiated and built

large infrastructure projects, many of which, to this day, are the foundation of what is healthy about the U.S. economy. President Abraham Lincoln initiated the Transcontinental Railroad in the 1860s, funded and built by the U.S. government. President Franklin Roosevelt's Four Corners Project-- the Boulder Dam (now named the Hoover Dam), the Grand Coulee Dam, the Tennessee Valley Authority and the St. Lawrence Project-- and literally hundreds of other projects big and small-- not only put people to work during the Depression, but provided the foundation for the World War II mobilization, which would have been impossible without those projects providing the electricity, the industries, and the trained workforce that that mobilization required.



*The Tennessee Valley Authority
 May 2005 map of TVA sites
 ■ Dam ■ Nuclear ■ Fossil*

“Did those projects pay for themselves?” is a question often asked. It is the wrong question. The right question should be, “did these projects increase the productive power of the economy and the labor force; did they shift the economy to a higher and more advanced platform of science and technology?” For a real economy is not measured by money, or whether this or that activity in the economy “makes a profit,” but whether the economy as a whole is creating higher real living standards for the population, which is measured by such factors as longer life-spans, better health care, improved nutrition, expanded education, etc.-- and this for the entire population of the nation. A good example was the Rural Electrification Administration, which, beginning in 1936, electrified the entire farm sector of the nation, by providing credit to farm cooperatives that would then run the program in local areas. In 1936 only 10 percent of the nation's farms were electrified, and by 1951 that percentage was 90 percent.

On the other hand, many of the large projects actually do pay for themselves. The Grand Coulee Dam in Washington State began construction in 1933 and began delivering electricity to the Northwest in January, 1942, in time to fuel the aluminum plants providing Boeing with the material to build the war planes. The cost to the federal government to build the dam was \$150 million. As of the mid-1990s (the last figure I have seen), the dam returned to the government more than \$4 billion from the sale of electricity and providing irrigation water. But, that is not all. That irrigation water turned much of eastern Washington State into one of the most productive agricultural regions in the world.



Grand Coulee Dam, on the Columbia River west of Spokane, Washington, is one of the largest structures ever built by mankind--a mass of concrete standing 550 feet high and 5,223 feet long--or just shy of a mile. Bureau of Reclamation

President Eisenhower's National Interstate and Defense Highways project (the interstate freeway system) is another example of necessary and successful government infrastructure project, which is funded by the federal gasoline tax, which you pay into every time you fill your tank.

“Traffic clogging the nation’s roads and bridges is at an all-time high. Ports and airports are at capacity. Unsound infrastructure puts lives at risk. Businesses and manufacturers are cutting into their bottom lines with wasted time and money. According to the NAM’s quarterly survey, manufacturers consider rising transportation costs a top business concern. The United States desperately needs a targeted, substantial investment in revitalizing the nation’s infrastructure. Congress should legislate identifying and prioritizing projects of national and regional significance requiring federal investment and vision to revitalize the nation’s infrastructure.”

***National Association of Manufacturer (NAM)
A “Building to Win” Strategy for Congress and President Trump
February, 2019***

https://www.nam.org/uploadedFiles/NAM/Pages/Building_to_Win/IIHR.BTW.2019.v08.pdf

Yes, the nation requires a national high-speed rail system, but it will never be done by individual states building their stand-alone lines, and it will never be funded by private investors. The purpose of such a nation-wide system is not to make a profit, but to enhance the productive power of the nation by bringing our transportation system into the 21st Century. As the third item below makes clear, it can only be done by a top-down federal government project. And a prerequisite for doing that requires the establishment of something like a National Infrastructure Bank, as specified in “LaRouche's Four Laws.”

LaRouche’s Four Laws for Economic Recovery and the Four Powers Agreement

Lyndon LaRouche has provided us with the Four Laws which can produce the economic recovery of the United States:

1. Re-enactment of the Glass Steagall Act separating commercial from speculative banking and

- ending public bailouts of Wall Street gambling debts;
2. A new national bank or other credit-issuing mechanism, such as Lincoln's Greenbacks, capable of producing massive amounts of credit for long-term economic projects;
 3. Use of this national banking mechanism to fund only such projects as will raise national productivity and create high-paying jobs in productive sectors of the economy; and
 4. A crash program to develop fusion power, the energy source of the future, the energy flux density and power of which allows us to transform raw materials, power entire continents, and power space exploration and colonization.

What follows are three reports:

1. **California's High-Speed Rail Project Should be Shut Down**
2. **China builds the world's longest high-speed rail as a rail stalls in the U.S.**
3. **A Plan To Revolutionize America's Transport: 42,000 Miles of electric rail and maglev**

1. California's High-Speed Rail Project Should be Shut Down

With California's high-speed rail project years behind schedule, tens of billions over budget, and plagued by mismanagement, newly inaugurated governor Gavin Newsom in his State of the State address on February 12, 2019, declared that the project as now planned must come to an end. Virtually canceling the project, he announced that instead of the original route from Sacramento to San Diego, which had already been scaled-back to be only Los Angeles to San Francisco, all that is going to be built now is the 170 mile section between two Central Valley cities of Bakersfield and Merced. That he is even holding on to that is nothing but a pathetic attempt to avoid the truth that the project is untenable financially, operationally, and politically.

State Senator Jim Nelsen (R-Gerber) ridiculed Newsom's plan: "We're going to put more billions into a train in a place where there is no ridership and no freight will be hauled."



Source: High Speed Rail Authority

The California High-Speed Rail Authority in its 2004 report claimed that the entire project would cost

\$33 billion and be completed by 2022. Now, with the estimated cost as high as \$77 to 90 billion, and before Newsom's announcement, the project would not have been completed before 2029.

Also, President Trump's administration has jumped in, demanding that the project be canceled and that the \$2.5 billion of federal funds already allocated and spent be returned. And on February 19, the Federal Railroad Administration announced that the \$929 million of a further federal grant will be canceled, since construction progress fails to comply with the terms of the grant.

To arrive at this disaster has been a 30-year, sometimes torturous journey. The torture should end now by the cancellation of the project.

It should be noted, that while the California high-speed rail project ostensibly began to be funded, planned and built in 2008, that same year China began building its high-speed rail system. While in California in ten years not one mile of track has been completed, in China almost 20,000 miles of high-speed rail is now fully operational.

What follows is first some background history of the project, followed by some exemplary samples of the disaster that it is, and then some excerpts of the California State Auditor's report on project dated November, 2018.

First some background

California Proposition 1A passed by the voters in 2008 was the culmination of a 20-year process to promote and build a California high-speed rail system. A paper written in December, 2008 provides the history of that process: “The Road to California Proposition 1A A History of the California High-Speed Rail Movement.”

<file:///C:/Users/patru/AppData/Local/Temp/CA-Prop-1A.pdf>

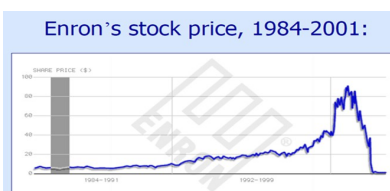
That proposition provided \$9.95 billion initial funding to begin to plan and build the project.

The argument for a California high-speed rail project that has been made since about 1988 is summarized in the above cited paper:

“With an estimated 2007 population of over 36.5 million – more than 10% of the nation’s total population – and the third largest land area of any state in the union, California faces daunting transportation challenges on both the local and statewide levels. The great distances and correspondingly lengthy travel times required for automobile travel between principal city centers, shown in Table 1, is prohibitively high for regular travel by car. This fact, in conjunction with the unbearably congested condition of many of the state’s highways in urban areas, was a major impetus for the push towards high-speed rail (HSR) as an effective method of intercity transit in the state of California.”

Between 1990 and 2000, steps were taken by the state government that both allocated funds to study and created a commission (the California High-Speed Rail Authority) to plan a high-speed rail project (HSR) to be built within two decades.

But 2001 the Enron energy scam and the dot-com bubble bust, created a state financial crisis and the HSR project was put on hold.



In 2002 a \$9.95 billion bond measure to finance the construction of the first elements of a HSR line was to be put on the ballot in 2004. That money would begin construction to connect Los Angeles, Bakersfield, Fresno, San Jose, and San Francisco at a projected total cost of \$13.7 billion.

The California High-Speed Rail Authority (CHSRA) released its report in January, 2004 which upped the cost of the project to \$37 billion. So in just two years the cost had risen by more than \$20 billion.

In June, 2004, the bond issue was removed from the November ballot and scheduled to be voted on in 2006. With the state still in financial difficulties, for the first time there was discussion of bringing in private investors to provide additional funding for the project. In 2005 the proposed \$9.95 billion bond issue was again postponed until the November, 2008 election.

So, finally in 2008 the bond is on the ballot and passes with a 53% yes vote. Virtually all the elected officials from the Governor on down, the cities and the press all supported the measure. In addition, as the cited report above argued:

“By 2008, interregional traffic in the state had predictably grown even worse than the conditions present during the original analyses nearly 20 years earlier. The CHSRA reported in its 2008 update of the Business Plan that well over half a billion interregional trips were made annually in the state, with 96% of the interregional travel market still dominated by car (Figure 1). Meanwhile, in the post-9/11 world of rigorous travel security leading to insufferably long waits and delays at airports, citizens had grown highly frustrated with spending more time waiting in the terminal than actually flying for intermediate-distance flights such as San Diego to San Francisco (about 1.5 hour flight time). To worsen matters for automobile and air travel, fuel prices reached an all time high of \$4.58 per gallon on average for California in late June 2008.”

Interestingly, opposition to the bond issue at the time claimed that the project will balloon in cost to \$90 billion-- a forecast that is close to what the CHSRA admits now the cost is heading to.

So, in 2008 the project is ready to go. Plans are announced that the line will be extended to Sacramento and San Diego, will cost \$33 billion, and be completed by 2022. Depending on the source, sometimes the cost figure published in 2008 is \$33 billion and sometimes it is \$37 billion. Playing fast and loose with cost projections back then should have been a warning that already something was going to go very wrong with the project.

To jump ahead a little, the Authority itself, in its 2018 business plan, now pegs the final cost of the project at \$77.3 billion. And others forecast the cost to rise to over \$90 billion.

In 2009, the Authority received \$2.6 billion from Obama's American Recovery and Reinvestment Act, and in 2011 an additional \$929 million in federal grant funding. The Authority also receives 25 percent of the revenues from the California State cap-and-trade program, which has been \$1.7 billion as of November, 2018. The Authority claims it has identified further possible future funding totaling \$15.6 billion.

Now, if we add it all up, it totals about \$15 billion already committed, plus we add on the vague \$15.6 billion the future may bring, and the total then is close to \$31 billion.

Where is the other \$45-50 billion to come from? No one has an answer to that question, though the Authority's 2018 business plan states that it will seek more federal grants (unlikely since President Trump has already demanded the project be canceled) and private sector partners (also unlikely).

What can the existing and hoped-for funding of \$31 billion actually build? Not much it seems. Before Governor Newsom essentially shit-canned it, the Authority, with the \$31 billion planned a 170 mile line in the Central Valley and a section between San Francisco and Gilroy, of approximately 85 miles. Note

there is no money in sight to even connect up those two sections. It also assumed that another \$10 billion will be found somewhere to even build them.

The governor's announcement this month eliminates the Gilroy line and leaves just the Central Valley section as a stand-alone project. Of course, the governor added that some planning and environmental studies on the entire planned project from Los Angeles to San Francisco would continue, but when and if it would ever be built is left up in the air. And what happened to the extensions to Sacramento and San Diego? Somewhere along the way they were dropped.

The plan now in place guarantees it would not be a true high-speed rail system

Since 2012 the Authority has adopted a policy of “blending” in order to speed up the project and to cut costs. Blending simply means that the trains will run on the existing tracks of other systems wherever possible. While that may save time and money, it obviously imposes a lower speed and a longer transit time, probably putting the average speed well below the 200 mph that defines an actual high-speed rail system. In addition, blending will mean that fewer trains can be run on the tracks.

In addition, state law requires that the system be designed to achieve a nonstop travel time from San Francisco to Los Angeles Union Station of two hours and 40 minutes. Now with a crude estimate only possible, that requirement incorporating the current level of blending, according to the Authority, is expected to be two hours, 36 minutes, and 56 seconds. That is really pushing it close to what is limited by law.

The disaster created by beginning construction in 2013

Construction in the Central Valley began in 2013 because the early start was necessary to comply with the requirements for the system’s federal grant funding. Thus construction work began before the land for building had been acquired, before how utilities would be relocated, and before agreements with cities, railroad operators and others had been negotiated. The result was more than \$600 million in change orders to pay for work that had not been foreseen. And the Authority has already calculated that at least another \$1.6 billion in extra costs for change orders are guaranteed just for the Central Valley section.

Yet, the work on the Central Valley section is going so slow that completion of this section, originally scheduled for 2018, is not now expected until 2022, and that will be met only by doubling the rate of completed work, which is unlikely to be possible. Should the Central Valley section not be completed by December, 2022 then all the \$3.5 billion of federal funds are liable to be returned to the federal government.

Excerpts from the California State Auditors Report

California High-Speed Rail Authority: Its Flawed Decision Making and Poor Contract Management Have Contributed to Billions in Cost Overruns and Delays in the System’s Construction

November, 2018

<https://www.auditor.ca.gov/pdfs/reports/2018-108.pdf>

This report concludes that the Authority’s flawed decision making regarding the start of high-speed rail system construction in the Central Valley and its ongoing poor contract management for a wide range of high-value contracts have contributed to billions of dollars in cost overruns for completing the system.

After years of planning for a fully dedicated high-speed rail system, mounting costs led the Authority to

decide instead to use existing infrastructure wherever possible—a cost control technique known as blending. Blending requires lower train speeds and imposes other service limitations, but the Authority will not know the full effect of these limitations until service planning and operations begin. Although blending has resulted in significant projected savings, those savings have only partially offset cost overruns. Further, potential time savings from reduced construction needs will be at least partially offset by the years that the Authority spent studying the dedicated options rather than pursuing blended options. The Authority has now exhausted every major opportunity available to share infrastructure with existing rail systems; thus, sharing infrastructure no longer represents a source of future cost savings.

The Authority's spending to date and future projections suggest that the risk of such additional cost increases is high. Costs for the three current construction projects in the Central Valley have been significantly greater than the Authority originally projected, in large part because the Authority did not complete many critical planning tasks before moving forward with construction.

The risks associated with beginning construction early—the fact that the Authority had not acquired sufficient land for building, had not determined how it would relocate utility systems, and had not obtained agreements with external stakeholders, including impacted local governments and other railroad operators—developed into costly problems. These risks have contributed to more than \$600 million in changes to construction contracts to pay for work for which the Authority had not sufficiently planned or budgeted.

2. China builds the world's longest high-speed rail as a rail stalls in the U.S.



A Fuxing bullet train, China's latest high-speed train, arrives at a train station in northern China's Tianjin municipality. Yang Baosen/AP

By [Krystal Hu](#)
[Yahoo Finance](#)

February 21, 2019

<https://finance.yahoo.com/news/china-builds-the-worlds-longest-highspeed-rail-as-a-rail-stalls-in-the-us-193536831.html>

As President Donald Trump feuds with California Governor Gavin Newsom over funding for the state's long-planned high-speed train, China has been further expanding its high-speed rail — the world's longest.

The U.S. and China announced ambitious plans to fund high-speed rail projects backed by government stimulus packages during the financial crisis in 2008. Since then, the length of high-speed rail lines in China has expanded to 18,000 miles, accounting for more than two-thirds of the world's total. That's five times more than what Japan has built since the 1960s.

How about the U.S.? As we know, high-speed rails haven't changed the way people travel in America as President Barack Obama once envisioned. States selected for rail project funds, including Wisconsin, Ohio and Florida, turned down the federal money as they saw little benefit to embark on such a project.



The Chinese government's official map of the high speed rail network by 2025.

There is one state that seems to be pulling it off. With a population of 40 million and a \$2.5 trillion economy, California was considered a promising state to have America's first real high-speed rail with an average speed of more than 160 miles per hour. With the support of former Governor Jerry Brown, California started to build its first high-speed rail in 2015.

But Governor Newsom's announcement to scale back the project amid ballooning costs crushed some people's hope. The Trump administration is not happy and is "exploring all available legal options" to recover \$2.5 billion in federal grants that were given to the project, leaving the previously proposed finished date of 2033 unlikely.

High-speed rails come at a cost

With higher population density and lower car ownership per person, it's no wonder that Beijing shows more enthusiasm when it comes to building a high-speed rail. To some in China, it also illustrates the institutional advantage China has over the U.S.

"The political and institutional system allow China to gather national resources to accomplish large undertakings," said Jia Limin, a professor at Beijing Jiaotong University who heads China's high-speed rail innovation program. Under a one-party system, the Chinese government backs rail projects by investing in technology innovation and infrastructure, which could also boost GDP growth. China has also grown from a builder of high-speed rail technology to an exporter of such technology to countries like Russia and Mexico.

China spends more on infrastructure annually than North America and Western Europe combined. In 2008, China announced a RMB 4 trillion (\$586 billion) stimulus package in an attempt to minimize the impact of the financial meltdown. Funded by both central and provincial governments, more than one-third of the package was dedicated to infrastructure, including railways, roads and airports.

3. A Plan To Revolutionize America's Transport (excerpts)

by Hal Cooper

42,000 MILES OF ELECTRIC RAIL AND MAGLEV

21st CENTURY

Summer 2005

<http://21sci-tech.com/Articles%202005/ElectricRail.pdf>

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The United States, and indeed the world, is now at a critical juncture, with two starkly different pathways for its economic and energy future. One is to continue to degenerate into fiscal austerity, as the result of 40 years of world financial deterioration, which began with the introduction of free-market, free-trade policies in the 1960s. The other option is to rise to a new height of growth and prosperity by returning to the American system of economics, as advocated by economist Lyndon LaRouche.

It is proposed here to construct a 42,000-mile-long route network conventional speed electrified intercity railroad lines for the transport of freight and passengers, which will be largely built on the trackage or rights-of-way of the already existing railroad network (Figure 1). There are also smaller route networks of 10,000 and 26,000 route-miles proposed as partial alternatives. In addition, there will be a 42,000-mile-long magnetic levitation network constructed generally along the existing interstate highway network, which will operate at very high speeds (Figure 2). There will also be 10,000- and 25,000-mile-long magnetic levitation networks.

The proposed national railroad electrification network will be designed to move large quantities of freight between cities, plus the passenger traffic which now goes by rail, as well as the traffic that will go by rail in the future. The proposed national electrified railroad network would be expanded from a starting point at almost zero today, to 10,000 route-miles by 2015, to 26,000 miles by 2020, and to 42,000 route-miles by 2030.

The operating characteristics of this intercity electrified railroad system would be as follows: The freight trains operating on these tracks would be designed to run at speeds of 90 to 110 miles per hour, carrying trucks and containers, and from 70 to 90 miles per hour for most other freight trains. The large, heavily loaded unit trains carrying coal would be the exception, as they would generally operate at speeds of 35 to 45 miles per hour, for safety reasons. Passenger trains would be designed to operate at maximum speeds of 125 to 150 miles per hour. The track configuration would be one of double tracks throughout, with crossover tracks and passing sidings at periodic intervals. There would be triple tracks or even four tracks along certain very heavily travelled railroad lines.

The construction of this national magnetic levitation network would be planned so that 5,000 route-miles would be in operation by 2020, with 10,000 route-miles by 2025, 25,000 route-miles by 2030, and 42,000 route-miles in operation at full capacity by 2040. The magnetic levitation system would be built as an elevated, double-guideway track system throughout, using some crossovers at periodic intervals. The system would be built primarily along the existing interstate highway medians, for ease of right-of-way acquisition as well as for safety and operational reasons. It would be designed to operate at speeds of 350 miles per hour, or even higher, in some locations between the major end-point cities.